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UTILITY
PATENT APPLICATION
TRANSMITTAL

(Only for new nonprovisional applications under 37 C.F.R. § 1.53 (b))

Attorney Docket No.	LEX-0051-USA
First Inventor or Application Identifier	Glenn Friedrich et al.
Title	Novel Mutated Mammalian Cells and Animals
Express Mail label No.	EL584856615US

APPLICATION ELEMENTS
See MEPEP chapter 600 concerning utility patent application contents

ADDRESS TO: Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

1. [ ] ***Fee Transmittal Form** *(e.g., PTO/SB/17)*
(Submit an original and a duplicate for fee processing)

2. [X] **Specification** [Total Pages 18]
(preferred arrangement set forth below)

- Descriptive title of the Invention
- Cross References to Related Applications
- Statement Regarding Fed sponsored R & D
- Reference to Microfiche Appendix
- Background of the Invention
- Brief Summary of the Invention
- Brief Description of the drawings *(if filed)*
- Detailed Description
- Claim(s)
- Abstract of the disclosure

3. [X] **Drawing(s)** *(35 U.S.C.113)* [Total Sheets 15]

4. **Oath or Declaration** [Total 1]

a [X] Newly unexecuted (original or copy)

b. [ ] Copy from a prior application (37 C.F.R. § 1.63(d))
(for continuation/divisional with Box 16 completed)

 i [ ] **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).

NOTE FOR ITEMS 1 & 13: IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 CFR § 1.27), EXCEPT IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 CFR § 128).

5. [ ] Microfiche Computer Program (Appendix)

6. Nucleotide and/or Amino Acid Sequence Submission
(if applicable, all necessary)

 a [ ] Computer Readable Copy

 b. [X] Paper Copy (identical to computer copy)

 c [ ] Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

7. [ ] Assignment Papers (cover sheet & document(s))

8. [ ] 37 C.F.R. §3.73(b) Statement [ ] Power of Attorney
(when there is an assignee)

9. [ ] English Translation Document *(if applicable)*

10. [ ] Information Disclosure [ ] Copies of IDS Statement (IDS)/PTO-1449 Citations

11. [ ] Preliminary Amendment

12. [X] Return Receipt Postcard (MEPEP 503)
(Should be specifically itemized)

13. [ ] ***Small Entity Statement(s** [ ] Statement filed in prior application, Status still proper and desired
(PTO/B/09-12)

14. [ ] Certified Copy of Priority Document(s)
(if foreign priority is claimed)

15. [ ] Other: ....
....

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16. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment:

[ ] Continuation   [ ] Divisional   [ ] Continuation-in-part (CIP) of prior application No:_____

Prior application information: Examiner_____   Group/Art Unit:_____

For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 4b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference.

17. CORRESPONDENCE ADDRESS

[X] Customer Number or Bar Code Label

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2423?

or [ ] Correspondence below

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Signature		Date October 4, 2000

NOVEL MUTATED MAMMALIAN CELLS
AND ANIMALS

The present application claims the benefit of U.S.
5 Provisional Application Ser. No. 60/157,651, filed October 4,
1999, which is herein incorporated by reference in its entirety.
The present application also incorporates U.S. Patent No.
6,080,576 and U.S. Applications Ser. Nos. 08/726,867, 08/728,963,
08/907,598, 08/942,806, 60/109,302, and 09/276,533 and their
10 respective disclosures herein by reference in their entirety.

1.0. FIELD OF THE INVENTION

The present invention is in the field of molecular genetics.
The application discloses novel mutated cells that are generated
15 by process involving the insertion of at least a portion of a
genetically engineered viral vector into the chromosome. The
specifically disclosed recombinant vector allows for the rapid
identification of the gene that has been mutated by using
nucleotide or amino acid sequence information to identify the
20 gene that has been mutated by the vector. When mutated embryonic
stem cell clones are produced, such cells can be used to produce
mutant animals capable of germline transmission of the described
mutated genes.

2.0. BACKGROUND OF THE INVENTION

Most mammalian genes are divided into exons and introns.
Exons are the portions of the gene that are spliced into mRNA and
encode the protein product of a gene. In genomic DNA, these
coding exons are often divided by noncoding intron sequences.
30 Although RNA polymerase transcribes both intron and exon
sequences, the intron sequences must be removed from the
transcript so that the resulting mRNA can be translated into
protein. Accordingly, all mammalian, and most eukaryotic, cells
have the machinery to splice exons to produce mRNA. Gene trap
35 vectors have been designed to insert into the introns of genes in
a manner that allows the cellular splicing machinery to splice

vector encoded exons to cellular mRNAs. Commonly, gene trap
vectors contain selectable marker sequences that are preceded by
strong splice acceptor sequences and are not preceded by a
promoter. Thus, when such vectors integrate into a gene, the
cellular splicing machinery splices exons from the trapped gene
onto the 5' end of the selectable marker sequence. Typically,
such selectable marker genes can only be expressed if the vector
encoding the gene has integrated into an intron. The resulting
gene trap events are subsequently identified by selecting for
cells that can survive selective culture.

Gene trapping has generally proven to be an efficient method
of mutating large numbers of genes. The insertion of the gene
trap vector creates a mutation in the trapped gene, and also
provides a molecular tag for ease of identifying the gene that
has been trapped. When ROSAβgeo was used to trap genes it was
demonstrated that at least 50% of the resulting mutations
resulted in a phenotype when examined in mice. This indicates
that the gene trap insertion vectors are useful mutagens.
Although a powerful tool for mutating genes, the potential of the
method has historically been limited by the difficulty in
identifying the trapped genes. Methods that have been used to
identify trap events rely on the fusion transcripts resulting
from the splicing of exon sequences from the trapped gene to
sequences encoded by the gene trap vector. Common gene
identification protocols used to obtain sequences from these
fusion transcripts include 5' RACE, cDNA cloning, and cloning of
genomic DNA surrounding the site of vector integration. However,
these methods have proven labor intensive, not readily amenable
to automation, and generally impractical for high-throughput.

More recently, vectors have been developed that rely on a
new strategy of gene trapping that uses a vector that contains a
selectable marker gene preceded by a promoter and followed by a
splice donor sequence instead of a polyadenylation sequence.
These vectors do not provide selection unless they integrate into

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a gene and subsequently trap downstream exons which provide a polyadenylation sequence. Integration of such vectors into the chromosome results in the splicing of the selectable marker gene to 3' exons of the trapped gene. These vectors provide a number
5 of advantages. They can be used to trap genes regardless of whether the genes are normally expressed in the cell type in which the vector has integrated. In addition, cells harboring such vectors can be screened using automated (*e.g.*, 96-well plate format) gene identification assays such as 3' RACE (see
10 generally, Frohman, 1994, PCR Methods and Applications, 4:S40-S58). Using these vectors it is possible to produce large numbers of mutations and rapidly identify the mutated, or trapped, gene by DNA sequence analysis.

15 ### 3.0. SUMMARY OF THE INVENTION

The subject invention provides numerous isolated mammalian mutant cell clones that are each characterized by the insertion of a mutagenic genetically engineered polynucleotide sequence into a gene identifiable as corresponding to one or more of the
20 OMNIBANK gene trapped sequences (GTSs) disclosed in Sequence Listing.

The subject invention further contemplates a mutated cell, and particularly a mutated ES cell, and the animals derived from such ES cell that stably maintain a genetically engineered
25 mutation in a gene identifiable as corresponding to one of the disclosed GTSs.

4.0. DESCRIPTION OF THE SEQUENCE LISTING AND FIGURES

The Sequence Listing is a compilation of nucleotide sequences obtained by sequencing clonal lines of gene trapped
30 murine ES cells.

Figures 1A-1C present a diagrammatic representation of representative gene trap vectors used to generate the described sequences.

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Figure 2 provides an index to the Sequence Listing and the corresponding database accession numbers for the genes that have been mutated according to the present invention.

5   **5.0. DETAILED DESCRIPTION OF THE INVENTION**

The current invention relates to novel mutated mammalian cells that are each characterized by the insertion of a recombinant (*i.e.*, genetically engineered) mutagenic polynucleotide sequence into a gene identifiable as corresponding

10   to one of the GTSs of SEQ ID NOS: 1-574.

For the purposes of the present invention, the term "identifiable" is to be construed as indicating that a mammalian cell, and preferably, a murine ES cell, has been mutated by the insertion of a polynucleotide sequence of recombinantly

15   manipulated origin at a genetic locus that normally comprises polynucleotide sequence, and/or post-spliced exonic sequence, that is at least partially described in one of the GTSs of Sequence Listing. One method of determining whether one of the described mutated mammalian cells has a mutation in a gene of

20   interest is by comparing the polynucleotide sequence (or a corresponding amino acid sequence) of the GTS identifying the mutated locus to the full length sequence of the gene. Alternatively, such searches can be conducted by comparing the described GTS sequence to a well known database (such as, but not

25   limited to GENBANK) using established computer algorithms including, but not limited to, BLASTX, FASTA, BLASTN, BLASTP, TBLASTN, and TBLASTX using the default parameters used, for example, at the National Center for Biotechnology Information web site (www.ncbi.nlm.nih.gov). The GTSs reported in the Sequence

30   Listing have been compared to such a database (GENBANK), and the accession numbers of the genes that have been mutated are presented in Figure 2. Accordingly, an additional aspect of the subject invention includes mutated mammalian, preferably murine, cells, or isolated cell lines, that have at least one engineered

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mutation in a gene identified by GENBANK or GENESEQ (for example) accession number in Figure 2.

As used herein, the terms "mutated" or "mutation" mean that the genetic locus has been altered by a process involving the integration or incorporation of a genetically engineered polynucleotide sequence into the genome of the cell with the result that the subsequent levels of activity of the product normally encoded by the locus is altered (*i.e.*, reduced, increased, or substantially ablated). In those instances where the mutation substantially completely disrupts the expression or activity of the product normally encoded by the locus (*i.e.*, a null mutation), a cell that is heterozygous for the mutated allele will typically produce about one half of the product of a nonmutated cell (via a gene dosage effect), and about twice the amount of product produced by a cell that is homozygous for the mutant allele.

The term "recombinantly manipulated" shall mean that such compositions comprising such molecules or polynucleotides have been genetically engineered using molecular biology methodologies *in vitro* or *ex vivo* (see generally, Sambrook *et al.*, 1989, Molecular Cloning, A Laboratory Manual, Cold Springs Harbor Press, N.Y.; and Ausubel *et al.*, 1989, Current Protocols in Molecular Biology, Green Publishing Associates and Wiley Interscience, N.Y.).

Where, the specifically exemplified mammalian cells, *i.e.*, embryonic stem cells (Lex-1 cells from murine strain A129), are mutated by a process involving the insertion of at least a portion of a genetically engineered vector sequence into the gene of interest, the mutated embryonic stem cells can be microinjected into blastocysts which are subsequently introduced into pseudopregnant female hosts and carried to term using established methods such as those described in, for example, "Mouse Mutagenesis", 1998, Zambrowicz *et al.*, eds., Lexicon Press, The Woodlands, TX, and periodic updates thereof, herein

incorporated by reference. The resulting chimeric animals are subsequently bred to produce offspring capable of germline transmission of an allele containing the engineered mutation in the gene of interest.

5   An alternative method of producing mutated cells and animals in the specifically exemplified genes involves the process of gene targeting by homologous recombination using methods such as those exemplified in U.S. Application Ser. No. 09/171,642, which is herein incorporated by reference in its entirety. Mutations

10 produced using such methods include, but are not limited to knockout mutations, "knockin" mutations (where a human gene, for example, is used to replace its murine orthologs), can be conditional, can include point mutations, and mutations that activate gene expression. Some of the mutations described above

15 (conditional mutations, point mutations, etc.) can be produced via processes that involve the substantial removal of vector encoded sequences (often recombines mediated) subsequent to the incorporation of the recombinantly manipulated sequences into the genome.

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     5.1. <u>**MUTATED MAMMALIAN CELLS OF THE PRESENT INVENTION**</u>

The presently described mutated cells have genetically engineered mutations in genes identifiable as corresponding to, or normally comprising, at least a portion of a sequence reported in the

25 Sequence Listing as SEQ ID NOS: 1-574. Additional embodiments of the present invention are cells comprising engineered mutations in homologs, paralogs, orthologs, etc., of the mutated genes disclosed in the Sequence Listing. Such homologs, paralogs, and orthologs include genes having sequences that hybridize to one or

30 more of the disclosed GTSs of SEQ ID NOS: 1-574 under stringent, or preferably highly stringent, conditions. Hybridization conditions also provide an alternative means of identifying the mutated genes corresponding to the GTSs reported in the sequence listing. Typically, such genes will be identifiable because a

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disclosed GTS, or portion thereof, shall hybridize to the gene under stringent conditions.

By way of example and not limitation, high stringency hybridization conditions can be defined as follows:

5 Prehybridization of filters containing DNA to be screened is carried out for 8 h to overnight at 65°C in a buffer containing 6X SSC, 50mM Tris-HCl (pH 7.5), 1mM EDTA, 0.02% PVP, 0.02% Ficoll, 0.02% BSA, and 500 μg/ml denatured salmon sperm DNA. Filters are hybridized for 48 h at 65°C in prehybridization

10 mixture containing 100μg/ml denatured salmon sperm DNA and 5-20 x 10^6 cpm of ^{32}P-labeled probe (alternatively, as in all hybridizations described herein, approximately 42, 44, 46, 48, 50, 52, 54, 56, 58, 62, 64, 66, 68, 70, or about 72 degrees or more can be used). The filters are then washed in approximately

15 1X wash mix (10X wash mix contains 3M NaCl, 0.6M Tris base, and 0.02M EDTA, alternatively, as with all washes described herein, 2X, 3X, 4X, 5X, 6X wash mix, or more, can be used) twice for 5 minutes each at room temperature, then in 1X wash mix containing 1% SDS at 60°C (alternatively, as in all washes described herein,

20 approximately 42, 44, 46, 48, 50, 52, 54, 56, 58, 62, 64, 66, 68, 70, or about 72 degrees or more can be used) for about 30 min, and finally in 0.3X wash mix (alternatively, as in all final washes described herein, approximately, 0.2X, 0.4X, 0.6X, 0.8X, 1X, or any concentration between about 2X and about 6X can be

25 used in conjunction with a suitable wash temperature) containing 0.1% SDS at 60°C (alternatively, approximately 42, 44, 46, 48, 50, 52, 54, 56, 58, 62, 64, 66, 68, 70, or about 72 degrees or more can be used) for about 30 min. The filters are then air dried and exposed to x-ray film for autoradiography. In an

30 alternative protocol, washing of filters is done for 37°C for 1 h in a solution containing 2X SSC, 0.01% PVP, 0.01% Ficoll, and 0.01% BSA. This is followed by a wash in 0.1X SSC at 50°C for 45 min before autoradiography. Another example of hybridization under highly stringent conditions is hybridization to filter-

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bound DNA in 0.5 M $NaHPO_4$, 7% sodium dodecyl sulfate (SDS), 1 mM EDTA at 65°C, and washing in 0.1xSSC/0.1% SDS at 68°C (Ausubel F.M. et al., eds., 1989, Current Protocols in Molecular Biology, Vol. I, Green Publishing Associates, Inc., and John Wiley & sons, Inc., New York, at p. 2.10.3).

Alternatively, moderately stringent conditions can be used (e.g., washing in 0.2xSSC/0.1% SDS at 42° C (Ausubel et al., 1989, supra). Moderately stringent conditions can be additionally defined, for example, as follows: Filters containing DNA are pretreated for 6 h at 55°C in a solution containing 6X SSC, 5X Denhart's solution, 0.5% SDS and 100 μg/ml denatured salmon sperm DNA. Hybridizations are carried out in the same solution and 5–20 x 10^6 cpm ^{32}P-labeled probe is used. Filters are incubated in hybridization mixture for 18-20 h at 55°C (alternatively, as in all hybridizations described herein, approximately 42, 44, 46, 48, 50, 52, 54, 56, 58, 62, 64, 66, 68, 70, or about 72 degrees or more can be used in combination with a suitable concentration of salt). The filters are then washed in approximately 1X wash mix (10X wash mix contains 3M NaCl, 0.6M Tris base, and 0.02M EDTA, alternatively, as with all washes described herein, 2X, 3X, 4X, 5X, 6X wash mix, or more, can be used) twice for 5 minutes each at room temperature, then in 1X wash mix containing 1% SDS at 60°C (alternatively, as in all washes described herein, approximately, 42, 44, 46, 48, 50, 52, 54, 56, 58, 62, 64, 66, 68, 70, or about 72 degrees or more can be used) for about 30 min, and finally in 0.3X wash mix (alternatively, as in all final washes described herein approximately 0.2X, 0.4X, 0.6X, 0.8X, 1X, or any concentration between about 2X and about 6X can be used in conjunction with a suitable wash temperature) containing 0.1% SDS at 60°C (alternatively, approximately 42, 44, 45, 48, 50, 52, 54, 56, 58, 62, 64, 66, 68, 70, or about 72 degrees or more can be used) for about 30 min. The filters are then air dried and exposed to x-ray film for autoradiography.

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In an alternative protocol, washing of filters is done twice for 30 minutes at 60°C in a solution containing 1X SSC and 0.1% SDS. Filters are blotted dry and exposed for autoradiography.

Other conditions of moderate stringency which may be used are well-known in the art. For example, washing of filters can be done at 37°C for 1 h in a solution containing 2X SSC, 0.1% SDS. Another example of hybridization under moderately stringent conditions is washing in 0.2xSSC/0.1% SDS at 42°C (Ausubel et al., 1989, *supra*). Such less stringent conditions may also be, for example, low stringency hybridization conditions. By way of example and not limitation, procedures using such conditions of low stringency are as follows (see also Shilo and Weinberg, 1981, Proc. Natl. Acad. Sci. USA 78:6789-6792): Filters containing DNA are pretreated for 6 h at 40°C in a solution containing 35% formamide, 5X SSC, 50mM Tris-HCl (pH 7.5), 5mM EDTA, 0.1% PVP, 0.1% Ficoll, 1% BSA, and 500 μg/ml denatured salmon sperm DNA. Hybridizations are carried out in the same solution with the following modifications: 0.02% PVP, 0.02% Ficoll, 0.2% BSA, 100μg/ml salmon sperm DNA, 10% (wt/vol) dextran sulfate, and 5-20 X 10^6 cpm ^{32}P-labeled probe is used. Filters are incubated in hybridization mixture for 18-20 h at 40°C (alternatively, as in all hybridizations described herein, approximately 42, 44, 46, 48, 50, 52, 54, 56, 58, 62, 64, 66, 68, 70, or about 72 degrees or more can be used). The filters are then washed in approximately 1X wash mix (10x wash mix contains 3M NaCl, 0.6M Tris base, and 0.02M EDTA, alternatively, as with all washes described herein, 2X, 3X, 4X, 5X, 6X wash mix, or more, can be used) twice for five minutes each at room temperature, then in 1X wash mix containing 1% SDS at 60°C (alternatively, as in all washes described herein, approximately 42, 44, 46, 48, 50, 52, 54, 56, 58, 62, 64, 66, 68, 70, or about 72 degrees or more can be used) for about 30 min, and finally in 0.3X wash mix (alternatively, as in all final washes described herein, approximately, 0.2X, 0.4X, 0.6X, 0.8X, 1X, or any concentration

between about 2X and about 6X can be used in conjunction with a suitable wash temperature) containing 0.1% SDS at 60°C (alternatively, approximately 42, 44, 46, 48, 50, 52, 54, 56, 58, 62, 64, 66, 68, 70, or about 72 degrees or more can be used) for
5   about 30 min. The filters are then air dried and exposed to x-ray film for autoradiography. In yet another alternative protocol, washing of filters is done for 1.5 h at 55°C in a solution containing 2X SSC, 25mM Tris-HCl (pH 7.4), 5mM EDTA, and 0.1% SDS. The wash solution is replaced with fresh solution and
10 incubated an additional 1.5 h at 60°C. Filters are then blotted dry and exposed for autoradiography. If necessary, filters are washed for a third time at 65-68°C and reexposed to film. Other conditions of low stringency which may be used are well known in the art (e.g., as employed for cross-species hybridizations).
15 Preferably, GTS variants identified or isolated using the above methods will also encode a functionally equivalent gene product (i.e., protein, polypeptide, or domain thereof, encoding or otherwise associated with a function or structure at least partially encoded by the complementary GTS).

20   Low stringency conditions are well known to those of skill in the art, and will vary predictably depending on the specific organisms from which the library and the labeled sequences are derived. For guidance regarding such conditions see, for example, Sambrook et al., 1989, Molecular Cloning, A Laboratory
25 Manual, Cold Springs Harbor Press, N.Y.; and Ausubel et al., 1989, Current Protocols in Molecular Biology, Green Publishing Associates and Wiley Interscience, N.Y.

        The identification of homologs, heterologs, or paralogs of SEQ ID NOS: 1-574 in other, preferably related, species can be
30 useful for developing additional animal model systems that are closely related to humans for purposes of drug discovery. Genes at other genetic loci within the genome that encode proteins which have extensive homology to one or more domains of the gene products encoded by SEQ ID NOS: 1-574 can also be identified via

similar techniques. In the case of cDNA libraries, such
screening techniques can identify clones derived from
alternatively spliced transcripts in the same or different
species.

5   Techniques useful to disrupt a gene in a cell and especially
an ES cell that may already have a disrupted gene are disclosed
in copending US patent applications Nos. 08/726,867; 08/728,963;
08/907,598; and 08/942,806, all of which are hereby incorporated
herein by reference in their entirety, are within the scope of
10   the current invention to disrupt a gene that encodes a
polynucleotide of the current invention.

5.2. <u>USES OF THE DESCRIBED MUTATED GENES AND ANIMALS</u>

The described mutated cells and animals are used to
15   investigate and define the cellular and biological functions of
the mutated genes. Producing a scientific model that accurately
accounts for the large number of genes, proteins, and
macromolecules within a single cell has thus far proved beyond
the capabilities of existing computer technology. It should thus
20   not be surprising that the far more complex task of modeling the
various intricacies, cross and direct redundancies, and
interrelated functions of the various metabolic and catabolic
processes that occur within a single cell has also proven largely
intractable to algorithmic methods of modeling and prediction.
25   Even if one assumes that computer modeling of inherently
chaotic/heuristic processes will rapidly mature in the near
future, such methods, at best, can only provide predictions that
subsequently require practical validation. Several decades of
empirical data have proven that mutant phenotypes provide a
30   valuable source of such validation.

The mutated diploid mammalian cells of the present invention
will initially exist as mutated diploid cells that are
heterozygous (except where genes on the X or Y chromosomes are
mutated) for the mutations identified in the sequence listing.

As such, via a "gene dosage" effect, the mutated cells can typically be characterized by the fact that they produce about one half of the mutated transcript/activity relative to cells having two nonmutated or wild type copies of the corresponding gene.

5   When mutant animals are produced from the mutated cells, heterozygous animals capable of germline transmission of the mutated allele can be bred to produce embryos or offspring that are homozygous for the mutant allele. Such animals or embryos are a rich source of tissues and cells that do not express physiologically relevant amounts of the mutated genes or activities encoded thereby. Accordingly, an additional embodiment of the present invention are mutant cells and animals that have homozygous mutations in genes identifiable as corresponding to the GENBANK, or other database accession, numbers provided in Figure 2, or are identifiable as a homologs, paralog, or orthologs of a sequence provided in the Sequence Listing.

    In addition to providing important information regarding the functional role of a given gene in its nonmutated state (i.e., you learn about the function of the gene by discerning the effects of reducing or ablating the activity normally encoded by the gene), the described mutated cells and animals can be used as disease models, or in assays for compounds or genes (via gene delivery or transgenic methods) that compensate for the mutant phenotype and that can be used to treat diseases and disorders related to the observed phenotype. Alternatively, such products and genes can also be used to enhance desirable, if not normal, symptoms related to the observed phenotypes.

    The gene replacement/delivery therapies described above should be capable of delivering gene sequences to the cell types within patients which express the peptide or protein having the desired activity.

The examples below are provided to illustrate the subject invention. These examples are provided by way of illustration and are not included for the purpose of limiting the invention in any way whatsoever.

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6.0. EXAMPLES

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6.1. GENERATION OF A LIBRARY OF MUTATED MOUSE ES CELLS DEFINED BY GTS SEQUENCES

The retroviral vector VICTR 3, described in detail in U.S. application Ser. No. 08/728,963, filed October 11, 1996, was used to generate a library of gene trapped ES cell clones that represent a portion of the described GTSs. A plasmid containing the VICTR 3 cassette was constructed by conventional cloning techniques and designed to employ the features described above. Namely, the cassette contained a *PGK* promoter directing transcription of an exon that encodes the *puro* marker and ends in a canonical splice donor sequence. At the end of the puromycin exon, sequences were added as described that allow for the annealing of two nested PCR and sequencing primers. The vector backbone was based on pBluescript KS+ from Stratagene Corporation.

The plasmid construct was linearized by digestion with Sca I which cuts at a unique site in the plasmid backbone. The plasmid was then transfected into the mouse ES cell line AB2.2 by electroporation using a BioRad Genepulser apparatus. After the cells were allowed to recover, gene trap clones were selected by adding puromycin to the medium at a final concentration of 3 μg/ml. Positive clones were allowed to grow under selection for approximately 10 days before being removed and cultured separately for storage and to determine the sequence of the disrupted gene.

Total RNA was isolated from an aliquot of cells from each of 18 gene trap clones chosen for study. Five micrograms of this RNA was used in a first strand cDNA synthesis reaction using the

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"RS" primer. This primer has unique sequences (for subsequent
PCR) on its 5' end and nine random nucleotides or nine T
(thymidine) residues on it's 3' end. Reaction products from the
first strand synthesis were added directly to a PCR with outer
5   primers specific for the engineered sequences of puromycin and
the "RS" primer. After amplification, an aliquot of reaction
products were subject to a second round of amplification using
primers internal, or nested, relative to the first set of PCR
primers. This second amplification provided more reaction
10 product for sequencing and also provided increased specificity
for the specifically gene trapped DNA.

    The products of the nested PCR were visualized by agarose
gel electrophoresis, and seventeen of the eighteen clones
provided at least one band that was visible on the gel with
15 ethidium bromide staining. Most gave only a single band which is
an advantage in that a single band is generally easier to
sequence. The PCR products were sequenced directly after excess
PCR primers and nucleotides were removed by filtration in a spin
column (Centricon-100, Amicon). DNA was added directly to dye
20 terminator sequencing reactions (purchased from ABI) using the
standard M13 forward primer a region for which was built into the
end of the *puro* exon in all of the PCR fragments.

    Subsequent studies have used both VICTR 3 and VICTR 20.
Like VICTR 3, VICTR 20 is exemplary of a family of vectors that
25 incorporate two main functional units: a sequence acquisition
component having a strong promoter element (phosphoglycerate
kinase 1) active in ES cells that is fused to the puromycin
resistance gene (or other exon sequence) that is followed by a
synthetic consensus splice donor (SD) sequence and lacks an
30 operatively positioned polyadenylation sequence downstream from
the SD sequence (PGKpuroSD); and 2) a mutagenic component that
incorporates a splice acceptor sequence fused to a selectable
and/or colorimetric marker gene and followed by a polyadenylation

sequence (for example, SAβgeopA, SAneopA, SAIRESneopA, or
SAIRESβgeopA).

Also like VICTR 3, stop codons have been engineered into all
three reading frames in the region between the 3' end of the
5   selectable marker and the splice donor site. A diagrammatic
description of structure and functions of VICTRs 3 and 20 is
provided in Figure 1.

When VICTRs 3, 20, and various variations thereof such as
the vectors and methods described in U.S. Applications Ser. Nos.
10 09/276,533, and 60/095,989 (the disclosures of which are herein
incorporated by reference), were used in the commercial scale
application of the presently disclosed invention, many
mutagenized ES cell clones were rapidly engineered and obtained.
Sequence analysis obtained from these clones has identified a
15 wide variety of sequences. Each of the sequences presented in
SEQ ID NOS: 1-574 identify novel mutations in the coding regions
of mammalian genes that identifiable as corresponding to the
sequences presented in the Sequence Listing. Alternatively, the
described mutated cells are described by the database (GENBANK,
20 GENSEQ, etc.) accession numbers for the corresponding genes that
have been mutated (see Figure 2). The described mutated cells,
and preferably ES cells, provide a valuable resource for
defining, evaluating, or validating the biological function or
disease/pharmaceutical relevance of each of these genes.

25   The cloned 3' RACE products resulting after the target ES
cells were infected with one of the described gene trap vectors
were purified using conventional column chromatography, (e.g.,
S300 and G-50 columns), and the products were recovered by
centrifugation. Purified PCR products were quantified by
30 fluorescence using PicoGreen (Molecular Probes, Inc., Eugene
Oregon) as per the manufacturer's instructions.

Dye terminator cycle sequencing reactions with AmpliTaq® FS
DNA polymerase (Perkin Elmer Applied Biosystems, Foster City, CA)
were carried out using approximately 7 pmoles of sequencing

15

primer, and approximately 30-120 ng of 3' template. Unincorporated dye terminators were removed from the completed sequencing reactions using G-50 columns as described above. The reactions were dried under vacuum, resuspended in loading buffer,

5 and electrophoresed through a 6% Long Ranger acrylamide gel (FMC BioProducts, Rockland, ME) on an ABI Prism® 377 with XL upgrade as per the manufacturer's instructions. The sequences of the resulting amplicons, or GTSs, are described in SEQ ID NOS: 1-574.

All publications and patents mentioned in the above

10 specification are herein incorporated by reference. Various modifications and variations of the described method and system of the invention will be apparent to those skilled in the art without departing from the scope and spirit of the invention. Although the invention has been described in connection with

15 specific preferred embodiments, it should be understood that the invention as claimed should not be unduly limited to such specific embodiments. Indeed, various modifications of the above-described modes for carrying out the invention which are obvious to those skilled in the field of molecular biology or

20 related fields are intended to be within the scope of the following claims.

WHAT IS CLAIMED IS:

1.   A genetically engineered mammalian cell that has been
5   mutated by a process comprising the insertion of a recombinantly
manipulated polynucleotide sequence into a gene in said
genetically engineered mammalian cell wherein said gene is
identifiable as corresponding to at least one of SEQ ID NOS: 1-
574.
10

2.   The genetically engineered mammalian cell of Claim 1,
wherein said cell is murine.

3.   A cell according to Claim 2, wherein said cell is an
15   embryonic stem cell.

4.   The genetically engineered mammalian cell of Claim 1,
wherein said polynucleotide sequence is present on a viral
vector.
20

5.   A cell according to Claim 4, wherein said viral vector
is a retroviral vector.

6.   A cell according to Claim 4, wherein said viral vector
25   additionally comprises regions of targeting DNA that facilitate
gene targeting by homologous recombination.

7.   An isolated murine embryonic stem cell line comprising
an engineered retroviral gene trap vector in at least one gene
30   comprising a polynucleotide sequence first disclosed in one of
SEQ ID NOS: 1-574.

ABSTRACT

Novel mutated mammalian cells are provided that have been characterized by identifying the sequence of the genes that have been mutated. Preferably, novel mutated cells are murine ES

5 cells that stably incorporate retroviral gene trap constructs in the specifically identified genes. The novel mutated cells and animals are useful in functional genomic analysis, and in the discovery and development of new therapeutic and diagnostics agents and methods.

10
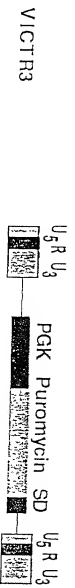
Figure 1

A VICTR3

B VICTR20

Wildtype Locus
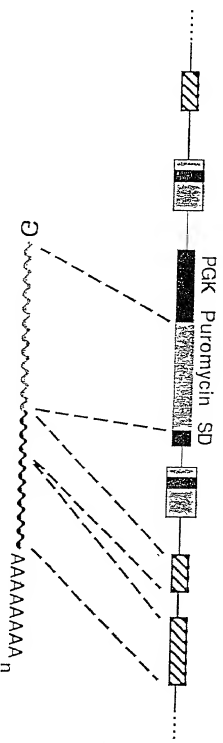
C
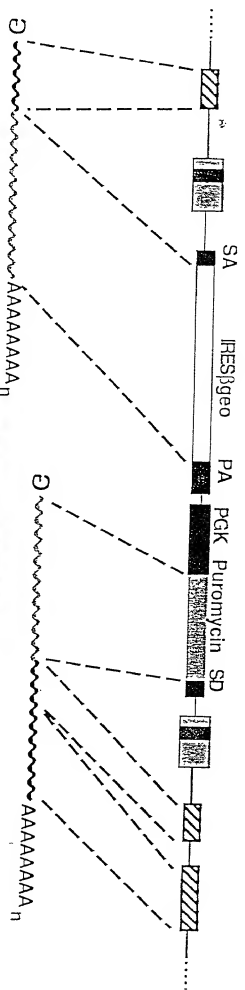
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FIGURE 2
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FIGURE 2
2 of 14

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FIGURE 2
3 of 14

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FIGURE 2
4 of 14

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FIGURE 2
5 of 14

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OST100497 OC18209 (Similar To: AA122589) Thu Sep 30 14:38:14 1999
OST100501 OC18210 (Similar To: Y00848) Thu Sep 30 14:38:14 1999
OST100503 OC18211 (Similar To: W53543) Thu Sep 30 14:38:14 1999
OST92874 OC17497 (Similar To: AI182419) Thu Sep 30 14:38:14 1999
OST100628 OC18227 (Similar To: AI173791) Thu Sep 30 14:38:14 1999
OST100637 OC8661 (Similar To: AB003113) Thu Sep 30 14:38:14 1999
OST100659 OC18234 (Similar To: AJ007909) Thu Sep 30 14:38:14 1999
OST78213 OC915 (Similar To: AI448395) Thu Sep 30 14:38:14 1999
OST100736 OC18248 (Similar To: AI315939) Thu Sep 30 14:38:14 1999
OST100738 OC18249 (Similar To: AI410900) Thu Sep 30 14:38:14 1999
OST100757 OC18252 (Similar To: U35323) Thu Sep 30 14:38:14 1999
OST100774 OC18254 (Similar To: AC005742) Thu Sep 30 14:38:14 1999
OST100797 OC18258 (Similar To: X68647) Thu Sep 30 14:38:14 1999
OST100802 OC18260 (Similar To: U37353) Thu Sep 30 14:38:14 1999
OST100894 OC18273 (Similar To: AF073297) Thu Sep 30 14:38:14 1999
OST98358 OC17909 (Similar To: AA964365) Thu Sep 30 14:38:14 1999

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OST100937 OC18278 (Similar To: C89519) Thu Sep 30 14:38:14 1999
OST100992 OC18283 (Similar To: AV042016) Thu Sep 30 14:38:14 1999
OST101094 OC18296 (Similar To: U76759) Thu Sep 30 14:38:14 1999
OST101305 OC18317 (Similar To: X70472) Thu Sep 30 14:38:14 1999
OST101319 OC18318 (Similar To: AJ002636) Thu Sep 30 14:38:14 1999
OST101338 OC18320 (Similar To: AI466791) Thu Sep 30 14:38:14 1999
OST101346 OC18322 (Similar To: Z50192) Thu Sep 30 14:38:14 1999
OST101368 OC18325 (Similar To: AI481250) Thu Sep 30 14:38:14 1999
OST101376 OC18327 (Similar To: AC004407) Thu Sep 30 14:38:14 1999
OST101386 OC18330 (Similar To: AV036188) Thu Sep 30 14:38:14 1999
OST101510 OC18345 (Similar To: U42624) Thu Sep 30 14:38:14 1999
OST101512 OC18346 (Similar To: AF051726) Thu Sep 30 14:38:14 1999
OST101516 OC18347 (Similar To: AI662973) Thu Sep 30 14:38:14 1999
OST101560 OC18357 (Similar To: X99641) Thu Sep 30 14:38:14 1999
OST101625 OC18363 (Similar To: X99946) Thu Sep 30 14:38:14 1999
OST101636 OC18365 (Similar To: AI643662) Thu Sep 30 14:38:14 1999
OST101647 OC18367 (Similar To: U83176) Thu Sep 30 14:38:14 1999
OST101734 OC18371 (Similar To: U61111) Thu Sep 30 14:38:14 1999
OST101772 OC18374 (Similar To: AF044174) Thu Sep 30 14:38:14 1999
OST101848 OC18379 (Similar To: AA615946) Thu Sep 30 14:38:14 1999
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OST102190 OC18410 (Similar To: AI122275) Thu Sep 30 14:38:14 1999
OST102365 OC18428 (Similar To: U13878) Thu Sep 30 14:38:14 1999
OST102384 OC18431 (Similar To: AA106674) Thu Sep 30 14:38:14 1999
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OST102446 OC18439 (Similar To: AF051348) Thu Sep 30 14:38:14 1999
OST102476 OC18444 (Similar To: AI448362) Thu Sep 30 14:38:14 1999
OST102512 OC18451 (Similar To: AC002406) Thu Sep 30 14:38:14 1999
OST102569 OC18458 (Similar To: AA655467) Thu Sep 30 14:38:14 1999
OST102740 OC18498 (Similar To: AA624788) Thu Sep 30 14:38:14 1999
OST102797 OC18507 (Similar To: X53081) Thu Sep 30 14:38:14 1999
OST102833 OC18512 (Similar To: AI552379) Thu Sep 30 14:38:14 1999
OST102891 OC18526 (Similar To: AC005742) Thu Sep 30 14:38:14 1999
OST102911 OC18531 (Similar To: AI451777) Thu Sep 30 14:38:14 1999
OST80033 OC7809 (Similar To: AA208937) Thu Sep 30 14:38:14 1999
OST102954 OC18541 (Similar To: L31840) Thu Sep 30 14:38:14 1999
OST103043 OC18553 (Similar To: M33385) Thu Sep 30 14:38:14 1999

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OST37918 OC8835 (Similar To: U68182) Thu Sep 30 14:38:14 1999
OST103062 OC18557 (Similar To: AA544462) Thu Sep 30 14:38:14 1999
OST91628 OC17352 (Similar To: AI406661) Thu Sep 30 14:38:14 1999
OST103176 OC18578 (Similar To: AA498813) Thu Sep 30 14:38:14 1999
OST103191 OC18583 (Similar To: AB016963) Thu Sep 30 14:38:14 1999
OST103269 OC18595 (Similar To: M32071) Thu Sep 30 14:38:14 1999
OST103282 OC18598 (Similar To: AI551580) Thu Sep 30 14:38:14 1999
OST103306 OC18601 (Similar To: AI117475) Thu Sep 30 14:38:14 1999
OST103313 OC18604 (Similar To: AC005960) Thu Sep 30 14:38:14 1999
OST103365 OC18611 (Similar To: AA027717) Thu Sep 30 14:38:14 1999
OST77866 OC10636 (Similar To: M93264) Thu Sep 30 14:38:14 1999
OST32175 OC6994 (Similar To: AI045566) Thu Sep 30 14:38:14 1999
OST103500 OC18627 (Similar To: AI158711) Thu Sep 30 14:38:14 1999
OST90697 OC17258 (Similar To: AA109830) Thu Sep 30 14:38:14 1999
OST103585 OC18642 (Similar To: AA645000) Thu Sep 30 14:38:14 1999
OST103612 OC18653 (Similar To: AI226654) Thu Sep 30 14:38:14 1999
OST103632 OC18656 (Similar To: AA791497) Thu Sep 30 14:38:14 1999
OST103675 OC18664 (Similar To: AJ222968) Thu Sep 30 14:38:14 1999
OST103784 OC18671 (Similar To: AV043672) Thu Sep 30 14:38:14 1999
OST103935 OC18685 (Similar To: AA107240) Thu Sep 30 14:38:14 1999
OST103941 OC18687 (Similar To: U58337) Thu Sep 30 14:38:14 1999
OST104056 OC18693 (Similar To: AI172058) Thu Sep 30 14:38:14 1999
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OST104179 OC18703 (Similar To: AB009371) Thu Sep 30 14:38:14 1999
OST104217 OC18704 (Similar To: AC003063) Thu Sep 30 14:38:14 1999
OST104220 OC18705 (Similar To: AA060976) Thu Sep 30 14:38:14 1999
OST104322 OC18717 (Similar To: AU041129) Thu Sep 30 14:38:14 1999
OST104386 OC18727 (Similar To: U63386) Thu Sep 30 14:38:14 1999
OST104435 OC18735 (Similar To: AA955274) Thu Sep 30 14:38:14 1999
OST104461 OC18737 (Similar To: AF046060) Thu Sep 30 14:38:14 1999
OST104538 OC18746 (Similar To: AA644811) Thu Sep 30 14:38:14 1999
OST104551 OC18750 (Similar To: AA199100) Thu Sep 30 14:38:14 1999
OST104599 OC18755 (Similar To: AI195350) Thu Sep 30 14:38:14 1999
OST104610 OC18760 (Similar To: U27268) Thu Sep 30 14:38:14 1999
OST104675 OC18772 (Similar To: U84725) Thu Sep 30 14:38:14 1999
OST104677 OC18774 (Similar To: U76373) Thu Sep 30 14:38:14 1999
OST59488 OC12491 (Similar To: W96857) Thu Sep 30 14:38:14 1999
OST105532 OC18782 (Similar To: AA939372) Thu Sep 30 14:38:14 1999
OST104750 OC18783 (Similar To: E00593) Thu Sep 30 14:38:14 1999
OST104761 OC18785 (Similar To: AA220132) Thu Sep 30 14:38:14 1999
OST104778 OC18788 (Similar To: AI427509) Thu Sep 30 14:38:14 1999
OST104862 OC18798 (Similar To: Y15465) Thu Sep 30 14:38:14 1999

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OST104931 OC18809 (Similar To: AI098029) Thu Sep 30 14:38:14 1999
OST105045 OC18825 (Similar To: AI021488) Thu Sep 30 14:38:14 1999
OST105067 OC18829 (Similar To: AV004732) Thu Sep 30 14:38:14 1999
OST105091 OC18833 (Similar To: AA940318) Thu Sep 30 14:38:14 1999
OST105173 OC18846 (Similar To: AA511161) Thu Sep 30 14:38:14 1999
OST105181 OC18849 (Similar To: L12458) Thu Sep 30 14:38:14 1999
OST105203 OC18850 (Similar To: AA497854) Thu Sep 30 14:38:14 1999
OST105205 OC18851 (Similar To: U21050) Thu Sep 30 14:38:14 1999
OST105439 OC18870 (Similar To: X52191) Thu Sep 30 14:38:14 1999
OST9307 OC1889 (Similar To: AI592419) Thu Sep 30 14:38:14 1999
OST105453 OC18872 (Similar To: C79730) Thu Sep 30 14:38:14 1999
OST47120 OC10746 (Similar To: AA387535) Thu Sep 30 14:38:14 1999
OST105476 OC18874 (Similar To: AA000443) Thu Sep 30 14:38:14 1999
OST105533 OC18879 (Similar To: AC005938) Thu Sep 30 14:38:14 1999
OST105556 OC4065 (Similar To: AA277365) Thu Sep 30 14:38:14 1999
OST105566 OC18882 (Similar To: AA197595) Thu Sep 30 14:38:14 1999
OST105584 OC18883 (Similar To: AI604572) Thu Sep 30 14:38:14 1999
OST105597 OC18885 (Similar To: AI233254) Thu Sep 30 14:38:14 1999
OST54916 OC6460 (Similar To: Y07783) Thu Sep 30 14:38:14 1999
OST105640 OC18894 (Similar To: AI323941) Thu Sep 30 14:38:14 1999
OST105765 OC18906 (Similar To: AA959545) Thu Sep 30 14:38:14 1999
OST105829 OC5715 (Similar To: AA673279) Thu Sep 30 14:38:14 1999
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OST106041 OC18922 (Similar To: AA036594) Thu Sep 30 14:38:14 1999
OST106073 OC18925 (Similar To: AA035834) Thu Sep 30 14:38:14 1999
OST106098 OC18932 (Similar To: AI020321) Thu Sep 30 14:38:14 1999
OST106313 OC18958 (Similar To: AA189644) Thu Sep 30 14:38:14 1999
OST106315 OC18959 (Similar To: AC005403) Thu Sep 30 14:38:14 1999
OST106332 OC18962 (Similar To: AA444862) Thu Sep 30 14:38:14 1999
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OST106357 OC18966 (Similar To: AA189644) Thu Sep 30 14:38:14 1999
OST106514 OC18979 (Similar To: AI316687) Thu Sep 30 14:38:14 1999
OST106581 OC18986 (Similar To: D14570) Thu Sep 30 14:38:14 1999
OST106594 OC18987 (Similar To: AA124650) Thu Sep 30 14:38:14 1999
OST106602 OC18988 (Similar To: X68283) Thu Sep 30 14:38:14 1999
OST106688 OC18996 (Similar To: U88328) Thu Sep 30 14:38:14 1999
OST106722 OC19004 (Similar To: AV000089) Thu Sep 30 14:38:14 1999
OST106728 OC19007 (Similar To: AU067280) Thu Sep 30 14:38:14 1999
OST106731 OC19008 (Similar To: U34932) Thu Sep 30 14:38:14 1999
OST106749 OC19013 (Similar To: AI595006) Thu Sep 30 14:38:14 1999
OST106770 OC19019 (Similar To: AA959452) Thu Sep 30 14:38:14 1999
OST106811 OC19028 (Similar To: AI643337) Thu Sep 30 14:38:14 1999

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OST106856 OC19033 (Similar To: AU067347) Thu Sep 30 14:38:14 1999
OST106869 OC19037 (Similar To: AC005818) Thu Sep 30 14:38:14 1999
OST106881 OC19041 (Similar To: AA041850) Thu Sep 30 14:38:14 1999
OST106890 OC19045 (Similar To: AA832824) Thu Sep 30 14:38:14 1999
OST106939 OC19051 (Similar To: X98038) Thu Sep 30 14:38:14 1999
OST107012 OC19060 (Similar To: AB014471) Thu Sep 30 14:38:14 1999
OST107051 OC19067 (Similar To: L00014) Thu Sep 30 14:38:14 1999
OST107151 OC17614 (Similar To: D13121) Thu Sep 30 14:38:14 1999
OST107244 OC19086 (Similar To: AI153399) Thu Sep 30 14:38:14 1999
OST107292 OC19094 (Similar To: AA471918) Thu Sep 30 14:38:14 1999
OST107332 OC19096 (Similar To: AA855257) Thu Sep 30 14:38:14 1999
OST107356 OC19100 (Similar To: AA161864) Thu Sep 30 14:38:14 1999
OST107362 OC19102 (Similar To: L00686) Thu Sep 30 14:38:14 1999
OST90765 OC17264 (Similar To: AI181055) Thu Sep 30 14:38:14 1999
OST107568 OC19134 (Similar To: AA086739) Thu Sep 30 14:38:14 1999
OST107585 OC19138 (Similar To: AI112066) Thu Sep 30 14:38:14 1999
OST107600 OC19141 (Similar To: AI429194) Thu Sep 30 14:38:14 1999
OST112455 OC19166 (Similar To: AF003867) Thu Sep 30 14:38:14 1999
OST107787 OC19171 (Similar To: D17569) Thu Sep 30 14:38:14 1999
OST107800 OC19174 (Similar To: AA415893) Thu Sep 30 14:38:14 1999
OST107858 OC19184 (Similar To: U15654) Thu Sep 30 14:38:14 1999
OST107880 OC19187 (Similar To: AF109719) Thu Sep 30 14:38:14 1999
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OST107941 OC19196 (Similar To: AJ007909) Thu Sep 30 14:38:14 1999
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OST108104 OC17051 (Similar To: U34281) Thu Sep 30 14:38:14 1999
OST108117 OC19217 (Similar To: AA189725) Thu Sep 30 14:38:14 1999
OST108127 OC19220 (Similar To: AI450342) Thu Sep 30 14:38:14 1999
OST108173 OC19227 (Similar To: AI105407) Thu Sep 30 14:38:14 1999
OST108242 OC19233 (Similar To: X96548) Thu Sep 30 14:38:14 1999
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OST108487 OC19266 (Similar To: AA285852) Thu Sep 30 14:38:14 1999
OST51781 OC8569 (Similar To: AU067347) Thu Sep 30 14:38:14 1999
OST108528 OC19273 (Similar To: AA124579) Thu Sep 30 14:38:14 1999
OST108582 OC19280 (Similar To: AI449172) Thu Sep 30 14:38:14 1999
OST108619 OC19284 (Similar To: AV008931) Thu Sep 30 14:38:14 1999
OST108660 OC19289 (Similar To: AA960383) Thu Sep 30 14:38:14 1999
OST108670 OC19290 (Similar To: AA254130) Thu Sep 30 14:38:14 1999
OST108798 OC19307 (Similar To: AI173382) Thu Sep 30 14:38:14 1999
OST108839 OC19318 (Similar To: AI527902) Thu Sep 30 14:38:14 1999

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OST108852 OC19319 (Similar To: AA107210) Thu Sep 30 14:38:14 1999
OST109111 OC19350 (Similar To: AA497714) Thu Sep 30 14:38:14 1999
OST109139 OC19355 (Similar To: AA013820) Thu Sep 30 14:38:14 1999
OST109202 OC19369 (Similar To: AI509495) Thu Sep 30 14:38:14 1999
OST109222 OC19373 (Similar To: AI663991) Thu Sep 30 14:38:14 1999
OST109276 OC19384 (Similar To: AE000664) Thu Sep 30 14:38:14 1999
OST109359 OC19395 (Similar To: AI385985) Thu Sep 30 14:38:14 1999
OST109402 OC19405 (Similar To: AF016913) Thu Sep 30 14:38:14 1999
OST109417 OC19407 (Similar To: Z22593) Thu Sep 30 14:38:14 1999
OST81392 OC16350 (Similar To: AI037215) Thu Sep 30 14:38:14 1999
OST109618 OC19432 (Similar To: D77463) Thu Sep 30 14:38:14 1999
OST109671 OC19437 (Similar To: AF020194) Thu Sep 30 14:38:14 1999
OST109687 OC19442 (Similar To: AF057525) Thu Sep 30 14:38:14 1999
OST109701 OC19444 (Similar To: C80530) Thu Sep 30 14:38:14 1999
OST109745 OC10003 (Similar To: AF036007) Thu Sep 30 14:38:14 1999
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OST109799 OC19463 (Similar To: L20334) Thu Sep 30 14:38:14 1999
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OST109864 OC19476 (Similar To: AF032968) Thu Sep 30 14:38:14 1999
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OST110308 OC19529 (Similar To: AA250378) Thu Sep 30 14:38:14 1999
OST110380 OC19537 (Similar To: D50416) Thu Sep 30 14:38:14 1999
OST110435 OC19545 (Similar To: X75384) Thu Sep 30 14:38:14 1999
OST110509 OC19552 (Similar To: AA544635) Thu Sep 30 14:38:14 1999
OST110552 OC19561 (Similar To: AA271370) Thu Sep 30 14:38:14 1999
OST110576 OC19567 (Similar To: AU066666) Thu Sep 30 14:38:14 1999
OST110611 OC19570 (Similar To: AA762868) Thu Sep 30 14:38:14 1999
OST110689 OC19580 (Similar To: AI587764) Thu Sep 30 14:38:14 1999
OST110811 OC19598 (Similar To: AJ010350) Thu Sep 30 14:38:14 1999
OST110895 OC19610 (Similar To: J05261) Thu Sep 30 14:38:14 1999
OST71835 OC7372 (Similar To: AF061270) Thu Sep 30 14:38:14 1999
OST110972 OC19619 (Similar To: L20257) Thu Sep 30 14:38:14 1999

FIGURE 2

OST110978 OC19622 (Similar To: AF002823) Thu Sep 30 14:38:14 1999
OST90943 OC17283 (Similar To: AI049328) Thu Sep 30 14:38:14 1999
OST110989 OC19624 (Similar To: AI527648) Thu Sep 30 14:38:14 1999
OST111097 OC19640 (Similar To: X01815) Thu Sep 30 14:38:14 1999
OST111142 OC19646 (Similar To: D31720) Thu Sep 30 14:38:14 1999
OST111550 OC19676 (Similar To: AF017128) Thu Sep 30 14:38:14 1999
OST111652 OC19691 (Similar To: AU020596) Thu Sep 30 14:38:14 1999
OST111760 OC19711 (Similar To: X72310) Thu Sep 30 14:38:14 1999
OST111762 OC19712 (Similar To: AA956723) Thu Sep 30 14:38:14 1999
OST111794 OC19718 (Similar To: AC004407) Thu Sep 30 14:38:14 1999
OST111803 OC19720 (Similar To: AA261345) Thu Sep 30 14:38:14 1999
OST111812 OC19723 (Similar To: U46923) Thu Sep 30 14:38:14 1999
OST111814 OC19724 (Similar To: AA289238) Thu Sep 30 14:38:14 1999
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OST112256 OC12708 (Similar To: AF146793) Thu Sep 30 14:38:14 1999
OST112342 OC19798 (Similar To: AA691518) Thu Sep 30 14:38:14 1999
OST65782 OC14351 (Similar To: AI151902) Thu Sep 30 14:38:14 1999
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OST112575 OC19834 (Similar To: AF060565) Thu Sep 30 14:38:14 1999
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OST112984 OC13929 (Similar To: AA139050) Thu Sep 30 14:38:14 1999
OST112989 OC19902 (Similar To: AA178100) Thu Sep 30 14:38:14 1999
OST113002 OC19905 (Similar To: AI613716) Thu Sep 30 14:38:14 1999
OST112788 OC19875 (Similar To: AB003594) Thu Sep 30 14:38:14 1999
OST112639 OC19842 (Similar To: AF061947) Thu Sep 30 14:38:14 1999
OST112152 OC19768 (Similar To: AI179057) Thu Sep 30 14:38:14 1999

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OST111588 OC19681 (Similar To: AA162465) Thu Sep 30 14:38:14 1999
OST111553 OC19677 (Similar To: AR018871) Thu Sep 30 14:38:14 1999
OST111075 OC19636 (Similar To: AI614473) Thu Sep 30 14:38:14 1999
OST107399 OC19109 (Similar To: AF076183) Thu Sep 30 14:38:14 1999
OST106871 OC19038 (Similar To: AB015206) Thu Sep 30 14:38:14 1999
OST106363 OC18970 (Similar To: AV043980) Thu Sep 30 14:38:14 1999
OST104364 OC18723 (Similar To: AV040390) Thu Sep 30 14:38:14 1999
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OST106660 OC18994 (Similar To: AF142676) Thu Sep 30 14:38:14 1999
OST111079 OC19638 (Similar To: AU017122) Thu Sep 30 14:38:14 1999
OST109199 OC19368 (Similar To: AV033092) Thu Sep 30 14:38:14 1999
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OST105265 OC18855 (Similar To: AI551992) Thu Sep 30 14:38:14 1999
OST105096 OC18834 (Similar To: AA789411) Thu Sep 30 14:38:14 1999
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OST101066 OC18289 (Similar To: AA061252) Thu Sep 30 14:38:14 1999
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OST99123 OC18029 (Similar To: AI226320) Thu Sep 30 14:38:14 1999
OST99043 OC18016 (Similar To: AA120641) Thu Sep 30 14:38:14 1999
OST94675 OC17585 (Similar To: AA575242) Thu Sep 30 14:38:14 1999
OST102943 OC10811 (Similar To: AI103588) Thu Sep 30 14:38:14 1999
OST41571 OC9717 (Similar To: W89289) Thu Sep 30 14:38:14 1999
OST77030 OC6255 (Similar To: AA763743) Thu Sep 30 14:38:14 1999

FIGURE 2
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DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION	ATTORNEY DOCKET NO. LEX-0051-USA

As a below named inventor, I hereby declare that:

My residence/post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Novel Mutated Mammalian Cells and Animals

the specification of which is attached hereto unless the following box is checked:

( ) was filed on _____ as US Application Serial No. or PCT International Application Number _____ and was amended on _____ (if applicable).

I hereby state that I have reviewed and understood the contents of the above-identified specification, including the claims, as amended by any amendment(s) referred to above. I acknowledge the duty to disclose all information which is material to patentability as defined in 37 CFR 1.56.

Foreign Application(s) and/or Claim of Foreign Priority

I hereby claim foreign priority benefits under Title 35, United States Code Section 119 of any foreign application(s) for patent or inventor(s) certificate listed below and have also identified below any foreign application for patent or inventor(s) certificate having a filing date before that of the application on which priority is claimed:

COUNTRY	APPLICATION NUMBER	DATE FILED	PRIORITY CLAIMED UNDER 35 U.S.C. 119
			YES:_____ NO:_____
			YES:_____ NO:_____

Provisional Application

I hereby claim the benefit under Title 35, United States Code Section 119(e) of any United States provisional application(s) listed below:

APPLICATION SERIAL NUMBER	FILING DATE
60/157,651	10/4/1999

U.S. Priority Claim

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code Section 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, Section 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

APPLICATION SERIAL NUMBER	FILING DATE	STATUS(patented/pending/abandoned)

POWER OF ATTORNEY:

As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) listed below to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Lance K. Ishimoto, Reg. No. 41866

Send Correspondence to:	Direct Telephone Calls To:
Lance K. Ishimoto **Lexicon Genetics Incorporated** **4000 Research Forest Drive** **The Woodlands, TX 77381**	**Lance K. Ishimoto** **(281) 362-6554**

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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Post Office Address: **Same**

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Inventor's Signature   Date

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Inventor's Signature   Date

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Residence: **163 Bristol Bend Circle, The Woodlands, TX   77382**

Post Office Address: **Same**

_____
Inventor's Signature   Date

<210> 1
<211> 442
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(442)
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cggcccccg ctgggtgcac actcgcacgc acaccctcgc acccataccc gcacacncgg   180
gagcacacgc acaggtantc agtcacacac caagggcagc agcgacggcg gacnaaacat   240
gctccggtgg cattgcaacc cccccacccc cgccatccaa ccttgcaatt cntttgcagt   300
cagacccaa accccacacc ttccccggag cccccctcca taaaaaantg ccttcccccc   360
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gcaaatgctc catcaaaagg gc   442

<210> 2
<211> 238
<212> DNA
<213> Mus musculus

<400> 2
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aagtgataat agagaagaca aagatcctgc aaaccaaaga aaacaccaga attttttcct   180
ccatgaagat ggacaaaact taaaccaaat taaagtttct tgattaaatg caaacact   238

<210> 3
<211> 310
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
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<223> n = A,T,C or G

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1

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aacaagcgga ggaagcctcc gagtgccctg cagctgaata aagcgaatgt ttaactggga        300
aaaaaaaaa                                                                310

<210> 4
<211> 468
<212> DNA
<213> Mus musculus

<400> 4
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cgcgccacac cgtcgatccg gaccgccaca tcgagcgggt caccgagctg ctgatgcaga        180
gaattgagca gcttaaatt tagatttcaa tatttgagag aaatcagtaa atgttcatac         240
tcgttaacta tgtcaaactt tttatttat aaaatatagt ctgctaatat gtatattggc        300
ataagaattc ccaacagcat tttatgactc cttgggttta aaacctcagt attaaattta        360
tcagtgtttg tggtgcagca catttaagtt caacatagtc cacacatttt gttggaagaa        420
gttttcaaat aaaaagcgcg agttggattt ttcccattaa aaaaaaa                      468

<210> 5
<211> 283
<212> DNA
<213> Mus musculus

<400> 5
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gattgcagga gataatgaaa actgcttgtt tcaacaggat cctaaaatga aaaagatggt        120
gttttgcatt tttattgtta gctccaaacc atggaagttt gaacttaaaa tgctgaagaa        180
gcaatgcaaa gatatctaat cagcattcgg gacaccttgc cactcttact tttctttaa         240
ctgaataaag atgcttgtaa gatagtggac caccacaaaa aaa                          283

<210> 6
<211> 252
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(252)
<223> n = A,T,C or G

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tctcnatgct gctntccagg acanacgcnn anaggnagng agctttggaa tccacccctt        180
ctgtggggga aaactacntt caccaggant accatggctt tnccagtncc agtanaatgg        240
tggacattgg cg                                                            252

<210> 7
<211> 318
<212> DNA
<213> Mus musculus

<400> 7
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cctgagggcc agatcaaaga agaatatcat caaggaagga tatgactctt cttcaatgag        120
ataggtacta acagtccagt acaatagcaa acaccaacca tgaatcagta gcagtggcaa        180
gatccagcag aaacagcaag actccatcga atcggcacaa gtcaacggaa gacgccagaa        240
tcagctggaa tatcataagt tctctggcac atttctctct gtgaagtgaa gaccaataaa        300
aagatcagtg aagaccgg                                                      318

<210> 8
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2

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<211> 411
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(411)
<223> n = A,T,C or G

<400> 8
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gtcggggtgc caagaaaaca ggcatctata cttctgatag gaagtttgtg caaataaaag     180
aaatggttcc agaatttgtc gtcccggact tgacgggctt caagctcaag ccctacgtta     240
attaccgagc tcctgcaggc atagacacac ctctgaccgc caaagcgctc ttccaggaaa     300
cagttgcacc cgctatcgaa aaagacttta aagaagggac atttgatgct aacaacctgg     360
agaaatccgg tttnaaccca cacaggaagg caagctggtc caatatatcc t              411

<210> 9
<211> 579
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(579)
<223> n = A,T,C or G

<400> 9
gactgcattt acccacatgg cagccctgtt cccaccaccg cctggtccca gatttgtcct      60
ccgaggcaca cagtcggctg tgaacacgct ccatttctgc ccaccatccc aagctgcagg     120
gaacccactt ctcttctcag ggtctcagaa tggcctagta catatctgga gcctacaaac     180
aagaagaata gttaccactc taaatggcca tggggggccag ggtgtaatct ggctgaagac     240
actgccacag ggacaccagc tcctcaggca gggtcganac ctgcggctgt gcctgnngga     300
cctggaggan ggcaggaaca ccatcatgga ctcannntnag ntggacagtg tgggcttatg     360
cagggggctcc atcctggtca ggggacagca gtgctggatg cttgctgtgc canggaaggg     420
cagcgacgaa gtgccacctg cgttaganat gaanggccaa gaagctgagt gacctncaaa     480
gaggaagact acttgntnca tggcttnagg ntggntcatc cnctgaancc tcagagnggc     540
atcttngtgt gtctgtggct tgggctgaac taataacca                           579

<210> 10
<211> 236
<212> DNA
<213> Mus musculus

<400> 10
cctgagagca ggttgttgcc ctggatgccc agaatatcgt aagctgttgc gtgtggagaa      60
gctcacacgt tagcgctgaa tgacaagggc caggtgtatg cttggggtct cgactctgac     120
ggacagcttg gcctacaggg atcagaggaa tgtatcagag tacccaggta acaaaggtga     180
ccgcacagag gtccttaagc ttctataata aatttatcta tctaaatcaa aaaaaa        236

<210> 11
<211> 375
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(375)
<223> n = A,T,C or G

<400> 11
aactgagatg cctgccttcg atgtcaagct gaaaacaaag caagaggact gtgttgtggt      60
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ctggggagag tgtaaccatt ccttccacaa ctgctgcatg tccctgtggg tgaaacagaa      120
caatcgctgc cctctgtgcc agcaggactg ggtagtccaa agaatcggca aatgagaggt      180
ggcccaggcg ctcctggtgt ggttgctgac cctggacaaa gactaaacac tgcagggggt      240
tcatccttga gagagagagg atgctgtgcg cctttgagac tcaccaaagg cttgctttat      300
taatttgtct gtttagtttt gggaaattct ctacaattaa aataatttgn taaaaatggc      360
ctttcctacc ttggg                                                      375

<210> 12
<211> 404
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(404)
<223> n = A,T,C or G

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ttgaccaaga gcagacggga aaagggaaagg cgctatacaa actcgtccgc ggacaatgag      180
gagtgtagggg tccccacgca gaagtcctat agttccagng aaaccttgaa agctttcgat      240
catgattctt cacggntgct ttatggaaac agagtaaagg atttggtcca cagagaagcc      300
gacgagtata ctanacaagg acngaatttt accctaaggc agttaggagt gtgtgaatcc      360
gcaactcnaa gaggagtggc nttctgtgcg gaaatggggc ttcc                      404

<210> 13
<211> 314
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(314)
<223> n = A,T,C or G

<400> 13
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atccctgcta ctccgccatg tttgggccca aaggctttgg gcgaggtgga gctganagcc      180
acactttcaa gtagaccgag gttgtggaaa ctctccctgc ccgcccaggc acatgccagg      240
ccttaccct ggacagcagg gctctcggga accctcagtg cctttaataa acctgatctt       300
tggaaaaaaa aaaa                                                        314

<210> 14
<211> 336
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(336)
<223> n = A,T,C or G

<400> 14
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atgccaaggg agaccgtatg cttcggaatg ctcaaggcta aggcccaggc cctggtgcag      120
tacctggagg aaccccctcac ccaagtagca gcatcataac agcgtgagat gccaggactt      180
ggaaggtgcc attncnaggg tggncaacct tntgntatnt ntgtatgcca nggagaccgt      240
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acccaagtag cancatcata acagcgtgag atgcca                               336

<210> 15
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<211> 280
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(280)
<223> n = A,T,C or G

<400> 15
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cgccttcacc tatggncct ctttggnncc ggacgggacn tggactaacc tggccnggt      120
gttcttncct ttttgaagan cttaaancct aggancctt ngtctgtcac accaggcctg      180
gggctggggg acagaaccgg agcacacacc ccctacanct gtcangnggg ggatggaacc      240
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<210> 16
<211> 329
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(329)
<223> n = A,T,C or G

<400> 16
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angagngctg ataaaagaag tnaagctttg aaaggtcctg caccttgccc atggccatca      180
ctaactgctc cgatccaca agatgaagac gtcggctaaa cttgagcaag cttttgttaga      240
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aaatgtatct gtgaatacca aaaaaaaaa                                        329

<210> 17
<211> 374
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(374)
<223> n = A,T,C or G

<400> 17
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ctcaacaaac taggaatcac agatcttaca agctgagttc tggctgctcc agttggaagc      120
ccacatgcca aactgctctg gagtcgccgg aggcatcagc agatcccagc cgagccttga      180
gagaggactg tgatctgcct tacgggtcac ctcactcagg actcagcgct cgcacgttgc      240
agcagctcca gaccccactg ntaccggaaa gttacaggta ccggaaccga gaagaccaag      300
cgcggcccag gaaccgcgga ggaaaacttc ccaggatggn ctcccactca aagctgagga      360
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<210> 18
<211> 396
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(396)
<223> n = A,T,C or G
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5

<400> 18

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ataggattaa atttacctcc aataaactga acttgattgt taaagcaata atattttagg     180
gccaagtgat tcagataatc accacaagta tttacatatt ttcaacagct ctatcttcct     240
tgtgattttt tttttaatta ttattatttt tagcctgaaa agngaataaa aaagcttggc     300
caaacccaac aaactaacat ctntatgaaa atgttaaatc tgggcattat ntgnantttt     360
tnaattaagn atttaatttt ctaaaaagta aatggg                              396
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<210> 19
<211> 115
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(115)
<223> n = A,T,C or G

<400> 19

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<210> 20
<211> 427
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(427)
<223> n = A,T,C or G

<400> 20

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ctaccgttac ctccagctgc gcagtgccag gcgccaggct gcagaagagc agaagacctc     180
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gcatgtcaac cctggcaaga actaggcccc catgcctttc aaacctgctg ggctaaaatg     300
ccttggtttc tgtagtgcta ctagcttgag ccgttnctga cagtttattg aggccatcaa     360
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aaaaaaa                                                             427
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<210> 21
<211> 362
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(362)
<223> n = A,T,C or G

<400> 21

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tgagctttga cagaggaact ggaatccgta gccagtgagc ttcatgccat tgacatccag      60
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gaaaatcaaa cagtacttgg aggactcttc ggctgaggcg agcagcgact tggacacatc     180
accagctgct tggaataaag aaggtttgcc actctcctgc cttgccatng ncgtaatcaa     240
gaatgaaatc actctgtgga tcagtgtgta ccgggagata aagctggcat ggggaacttg     300
caggcagata ttctttattc atgtgctata atattttaca tgtaaacttg gaaaaaaaaa     360
aa                                                                   362
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<210> 22
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<211> 330
<212> DNA
<213> Mus musculus

<400> 22
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attgaccctc tgaattcatc agaagatatt ctgaagcctg aaacataaga taaaaaccag   120
tggccgtttg ttctactagt caacaaagac tagtatcttt ccgttctaag ttcatcattg   180
aatgagattg ttcttctgat tagagtagaa aactgaaggt tcatgattat ctaggtaaga   240
tacacacaag aattttggcc cacataaaca aatgatttga gctaaagagt ttgaaagtat   300
aaatttagat ttctgcatga ataaaaaaaa   330
```

<210> 23
<211> 535
<212> DNA
<213> Mus musculus

<400> 23
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tgcggccctg agagtcaggt ggctgcaaag gacaaccgc ggtgtggtgc cacaggaggc   120
accgagagcc ttccacatga ccaaggccat gttgccaggg acatatccta ggaccccaga   180
agaacgggcc gcagccacca agaagtgtaa tatgcgtgtg gaagactccg agccattccc   240
agatgatggc atcgggtaat ggtgactacc cgatgcttcc ccaaccgatc gcagcatgag   300
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actgggacct agacatttac gtcaggatca ggagtcgtgt ggacacgtcg cctacacctg   420
cttcctgaga tgatgtcatg tgtaaacact gcttcggctt cgtggctttc atggtttttca   480
tgttctgggt aagggacatg ttcccttctt aaagcagtac ccttacaata tccg   535
```

<210> 24
<211> 244
<212> DNA
<213> Mus musculus

<400> 24
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aattccgcaa gtttgacctg aacagccct gggaggcttt ccctgcctat cgccagcctc   120
ctgagagtct caagctcgaa gctggagaca agaagcctga aaccaagtaa cttcaaaagc   180
atgtgatcc tagaggaaaa ggcctcacct aaggttgtct gtaaataaac tccaatggac   240
attc   244
```

<210> 25
<211> 439
<212> DNA
<213> Mus musculus

<400> 25
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ctgtgcacaa gtgcttccct gactgtcttc gctgagcaat gaaactgcaa tgacgctcta   120
cacttggacc tgaactctgt gtgcctttt gtccaagcac agggtctgtg ttacaccagc   180
atattcttac ctatgtggag gcacaggtat gccaatgctg ctggtcttat gttgaaacat   240
gtaaaggtac tggtttggtt ttcattctca tttaggaaaa tgtgatctaa agtcagctaa   300
tagatccaaa cagcacaaat ggacttttct tttcaagatg gacttggatg gtattgtaaa   360
tatctagtc atatgatcag ctccagctga catctgagtg accttctaaa gtcagcctgc   420
aggattttcc aagcatgct   439
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<210> 26
<211> 107
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(107)

7

<223> n = A,T,C or G

<400> 26
tgggctccat cgccancact gtnngaaaca aaaaccaaac cccgaaatgc tnacttattc     60
atcaagggga gtttgaccaa tgctttgggg gccttcaaaa aaaaaaa     107

<210> 27
<211> 256
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(256)
<223> n = A,T,C or G

<400> 27
gctttagcaa aacaatcaac aatccagtaa gttgctgtat gattggaggc atatgcaggt     60
atctgtgcaa gggcaacatt cttcagaatg gcaattgtgg agttactagt ctcaactgct     120
gcaagagaaga atagagaaga agtcaaagat ncagtgaacc naagaaaaca atttgcacct     180
ccatgaagat gaaccaaaca taaactaaat taaagttcct tgattaaatg caaacgcatg     240
ttggtaaaaa aaaaaa     256

<210> 28
<211> 135
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(135)
<223> n = A,T,C or G

<400> 28
cagaatggct gatacctgca aaatgaaata ctnagtgtng gacagcccct tgnggaanat     60
ggagctgtct ggctgtgagc gaggnctgca tgggatacgg ntgctcactg ggaanacccc     120
aaacactgac tccgc     135

<210> 29
<211> 186
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(186)
<223> n = A,T,C or G

<400> 29
acgtcagttc acaatgccag ncctggaant gagttactgc anaggaaaaa accacacata     60
gcctatgaga gcagtgaggg ggtggagaga anaggtggat gtcccctta cttcnaacat     120
gcttttgaca cacaccaact tnngngnttn gatctggtgc aaattaaaag accaatgtga     180
gatatg     186

<210> 30
<211> 335
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(335)
<223> n = A,T,C or G

8

```
<400> 30
gacatagtct gtggtgagtt ggaagaaggt gaactggaag acgacggggc tgaggaggtc      60
caggacccccc ctggaggaca agagaggagt cggaaggaga aggggggagaa gcaccacagc     120
gactctgagg aggagaagtc tcaccggagg ctgaancgga agcggaagaa ggagcgggag     180
aaggaaaaga ggcgctcgaa aaaaaggcgg aaatctaagc ncaaacgcnn tgcttcctcc     240
agcgatgact tctcgngact tctcanatga ctcanatttc ancccccagtg agaanagtcc     300
cgcaagtacc gggactntag tcccccatac gcacc                                335

<210> 31
<211> 144
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(144)
<223> n = A,T,C or G

<400> 31
tcttgaagcc cagaacatga tnaagggttg ttcgggctcc ttgaatataa ctctacaatc      60
gagcttcatg gtgcaaggca cgagtgatcg ggtntcgtcc anaagggtga acctaatgaa     120
gtaaatnccc ttgtgcccat tacg                                            144

<210> 32
<211> 138
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(138)
<223> n = A,T,C or G

<400> 32
ttaaatgaga gactcacnga nctgcacttt ccgcaaaagn cccnaatgng ggccccgtac      60
cctctgtacc cagcggannat aggngcctgc tcttnctcct cctgccgctt tcacctaccc     120
ngcttcactg gatgccca                                                   138

<210> 33
<211> 480
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(480)
<223> n = A,T,C or G

<400> 33
gactgagctt agggcngtct aagaataatg ctatnataaa cagccgacct tantgcaaag      60
atattggcgt ttccaagaca acaagataca agatatatgc tttggagncc taggagaatc     120
ttggattcaa agacctgtan nggncaggta ctacagtgaa ggtcaagagn ttgcagcaag     180
angactcatt natagaagga gtgancgacc aangccttgt ggctgtggtg ntcagcttgn     240
cgntgaccgn tactntcctg tatgcacttn tcagaaatgt ncnncntgaa catncatcca     300
taaaaccang agctaggcng agtgcttcna gaacaatncc naacagaaca ggatgtgnct     360
gctcctgccc gacagcagta tctacactga aatgnnctgt ccaatctgct tacatcaagc     420
ctccttttcct ngttgaaaca aactgtggac atctctttg tgggtctgct aattgcatac     480

<210> 34
<211> 219
<212> DNA
<213> Mus musculus
```

<220>
<221> misc_feature
<222> (1)...(219)
<223> n = A,T,C or G

<400> 34
tcactaccgc gtgttccaca ccattagtca nngagggctc actctaggac acaagctanc   60
ctaggactgc tngaggnccc tncagcaaga cgannggtgc ttnnganaat tttntcccca   120
tgtgnggntg aatangctgg aannncactt ttatcaccat ctgacccatt aggaccttgn   180
naacatagaa ttaaaagcga ntaatctgga aatctcaca   219

<210> 35
<211> 152
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(152)
<223> n = A,T,C or G

<400> 35
cttatatatt gatgccaaaa taggancatg gtgngncnga cnncnaaggg canctctgga   60
ggcaaccct atgccatgcg ttggaaacan caccggngcc tctggnaaga anccgggnag   120
aggaaccatg gangaggatc ctatggatgt ct   152

<210> 36
<211> 201
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(201)
<223> n = A,T,C or G

<400> 36
actgagggaa ctgcagcaac aaggaatgcc tgttcctgca cttgaagcca gttctcaagc   60
tccaggactg ccgtgtat aaccaagggt tctgcaagga aggtcccctg tgtaaatacc   120
gccatgttca tcaagtactg tgtnccaact acttcaccgg cttctgcccc gagggacctc   180
agtgccaatt tgggcaccat a   201

<210> 37
<211> 219
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(219)
<223> n = A,T,C or G

<400> 37
gggggcggaa agcgaaaacc actccaggnt ntnnctttgc tttgcgttcn ctggatccac   60
ccccacgcct ggtaaggncc aagcaaccat ggcaggnact agagggagag taaggctata   120
gaagccaatg gagggagggg actcatggaa agntggccca aacccaacct gaccccacac   180
tggcaccttg ctagcccaat aataaacatt ttgctgatc   219

<210> 38
<211> 289
<212> DNA
<213> Mus musculus

10

```
<220>
<221> misc_feature
<222> (1)...(289)
<223> n = A,T,C or G

<400> 38
gaggactttg gaaatcctaa atggccnagc tactgcaatc tccacccagg ttccttcctg        60
aggagtggta tattgctaac aaaagccagt accanagagc aagaggnccc ataaggtccc       120
tgnnnctaga acgcttggtt ggcannagag ccagaaggct tngtngngaa gaaattgaga       180
agaccaccag gaagtctnag tagcgacgtg aacaangaaa ctttgngnca gagactntga       240
gngagggtca agngttctcg ggaagnaagc nnttacaatg acaaaactt                   289

<210> 39
<211> 138
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(138)
<223> n = A,T,C or G

<400> 39
gccataatta cttcttgtgg aactctcnga ggtcggacng gagangtgac atggntcctt        60
anattnacat gtgcttacgg agaaacnggn ggtgcgtctg aanagcccag aacacagtct       120
cggagagtc ggccccccg                                                     138

<210> 40
<211> 129
<212> DNA
<213> Mus musculus

<400> 40
taagcctggg tggcaacctt caggtggcac tggaaactac ctggttcctg gacatgccca        60
gtagaaggcg gggtcccagt cggcagcagc taaggtaagg gatattaaat gtatccataa       120
acaaaaaaa                                                               129

<210> 41
<211> 223
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(223)
<223> n = A,T,C or G

<400> 41
actgaggtaa cattcaggaa tcctgggntg atgatacatc agccttcgtt tctctcagcc        60
agccagaaca agtacaaatt ggttagtgtc ctagacatat gttttgtttg ttaatgaggt       120
gggggtggtc acctttatga cagctgtggt ttcaggcagc tagctggctc acttagcatt       180
tctgcttgtt ttattttag cttgctagtt aaataaagaa aaa                          223

<210> 42
<211> 482
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(482)
<223> n = A,T,C or G
```

11

```
<400> 42
gactgagggt tttgcggcct ccaggtggtg ggtccaattt ttcattaggc tttgatgagc        60
cagcagaaca gcctgtgagg aagaacaaga tggcttctaa catctttggg acaccggaag       120
agaaccccc  atcttgggcc aagtcagcag gttccaagtc tagtggtggc agggaagatt       180
cggagtcgcc tggaacacag agaagtaact cttctgaagc aagctctgga gatttcttag       240
acctcaaggg agaaggtgat atgcatgaaa atgtggacac agacttccaa gccaacctgg       300
cgcagatgga ggagaagcca gtgcccgctg ctcctgtgcc cagcccagtg gcttcagccc       360
cagtgccatn caggagaaac cccctggcg  gcaagtccag cctgtgcttg ggttagcttc       420
ttgngttgga actctgncct tttgnctgnc tggttggtgg cccatgcttg ggaactgcac       480
ag                                                                     482

<210> 43
<211> 379
<212> DNA
<213> Mus musculus

<400> 43
ctgagttaca ggatgttaga tccggtacag aagagaatga ggaaaagcta cttatcagag        60
gaaagatcac cgatcactgg acaaatcgta accaggctct ggacctgcaa cattccaacc       120
tctccacaca gcgcggtggc tctgattggc ccttcaacct ttacaaacac agctgctttc       180
taggaatgcc ctccacact  agcaattcca tcgccctacg agctaagatc tggcatcttc       240
gagtgccatg caagcagaga ttcaaagtca atgtctcaaa actaaatcac tttttctttta       300
tcttgagaca cacattcttt ttcctttgtt tgacaataaa ttaggatgct ttgtttttttg       360
gcttttttcaa aaaaaaaaa                                                   379

<210> 44
<211> 487
<212> DNA
<213> Mus musculus

<400> 44
gactgagcat gaccctgcct ctccttaccc gccatgatgg atcagccagc tcagtaagcc        60
tgctcacacc tctttgtcct gacctggaag gaaagaaaga ctcgatgagc atgaggatca       120
gcacaccgtc tgcctcagct ccctcccgct cccgctgtgt ttctccatct ctgaggcatg       180
gcatgctccc atccatcccc actgcgggaa tgaacccacg tgcagcagct cttcaccccg       240
gggagtccgc atcggccacg tccttctagc tgtttaaaag tcaactagcc acaatctgga       300
gtcgcctggg aagagagccc caactgacat tgcctaggtc aggctggtct atgggtgtgt       360
ctgtgagggа ctgactgttg atccatatgg gaagacccag accaccattc cctgggcagg       420
tgaccctgga ctatgtaagt gaagaaaact tgctgaacat aggtggtaag caagcagtgc       480
ctccaca                                                                487

<210> 45
<211> 458
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(458)
<223> n = A,T,C or G

<400> 45
ccgtaccgga agcatgaagc cagaggngcc atgcagaggn ccctgctgaa gctccaagct        60
cactgagctg ttagagcgcc tgcanagaga cagggangat ntgggtttt  ttggaaacct       120
tatntttcca ctccttttag cagngatcan gctgatacct tgncagatct tctgcctgcn       180
caagtgtctg cagccgtgtg actgnntgta cncaaactag gacctgncca gacgncagtg       240
angatnagtn nnntgnactt gctgccttng cctgancaan gctatnacac ggaggctggt       300
cactctgaag gccttcaagc tgagccgcat tcacttggga gcagcttcta cggtgtaang       360
ataggatnat ctgctccacg cacgggggtca ttgcaggnga agcacttggt gcaggnggcg       420
aaatccacta tactggtnga caaatgtgat ctaactac                              458

<210> 46
<211> 174
```

<212> DNA
<213> Mus musculus

<400> 46
gagcagcacc tggaatgcat agagaaccag gttccctttg gaaaatattc actcgcttcc   60
accagcccaa acccgaaggt accatcagta cgtgaggcct acaacagggt tctctgtttt   120
cctgtagcca gcctctctga tgctcccaac aatgtatttg aaaagcacct tgat   174

<210> 47
<211> 196
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(196)
<223> n = A,T,C or G

<400> 47
gactgagaaa aattttaagt gcctccttat gccaaggaag ggccaggttt tggatgactt   60
caactaacag tagagattgc tgtcctaggg actaagnnta cacacatgaa taaangacgg   120
aaattccagt taaaaggnaa aggagnncgt ggggcctant cnccnnggtc angncncaag   180
gactaagtat cgacgc   196

<210> 48
<211> 548
<212> DNA
<213> Mus musculus

<400> 48
gactgaggta ttgtccaggg ctttctcaca gctcctaaag acggacctca gacgtgcatc   60
acgtggacct ctgaaaaaac catggagctc attgctccaa agccaactgg agagcttctc   120
ccaatcctgc tgctgctgct gttacagctg cttacaacag ccattgtcgt ggctagagtc   180
ttatattcac tgtgacacca taggagaaat gattccactt ttgctgtctt acatgaccta   240
ataaaaggag gcacatccca ttatactctc aaaccctgtc tgcactcagg gagaggttat   300
aacctcatta aggatctttg gagccatttt ttaggtcttg gcaaccatgg ttcttgaatg   360
ggtaactgct ggcagaacat gaaatccttc ctaaactgat tgtccacttt tttctttgac   420
attctcttga gaacagccac tagtttctca gtgtgcttag caaatatgaa tttacaatat   480
aaatcaatat ggacattcat gtttcacaga cttcaaaatt acatctatga gcatattttg   540
gcacatag   548

<210> 49
<211> 208
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(208)
<223> n = A,T,C or G

<400> 49
tcagctggca tcaatcagga tcccatccct gagaggactg catcaactct tttggaaact   60
gtcttcccac cttgatgccc tgcgctgtgc agcttctgaa aatgacanac agggaacggt   120
cacctggcc atgganantg naangctngg ataactagan gattttcttg gaacagatan   180
gncctttccc tagtgccata gaaaacaa   208

<210> 50
<211> 104
<212> DNA
<213> Mus musculus

<400> 50

13

```
gcacacgcca ttcacgctgc tcaagggcag gtcggcacca gtatcagggg cttcggcacc        60
tgcaggaatg tcaaattaaa catctgttaa tagtaaaaaa aaaa                        104
```

<210> 51
<211> 239
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(239)
<223> n = A,T,C or G

<400> 51
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ctagacgatc actctncnca gagtgactct cgncgaaaac ngacagaaat ggctncngga        60
tgagatggac tctgactggc gaancacctt tgagcttgtn acctagcagc tggggccagt       120
gagaggngac tnaaacnctc ntgcctcagg ntcttanaac agnagtggcn attgangctn       180
acanaataac atgcctnttg ggcaaggatg atnggnctcc tggctaatgt tcaatctag        239
```

<210> 52
<211> 539
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(539)
<223> n = A,T,C or G

<400> 52
```
tgaggtagaa gccctcattc ttcatctacc ctttttcag tatctggcac caattctggc        60
cccatcattt gtggcccatg gctcttgtgg tatgccgaag atttacaggc agtttctgtg       120
gaacatttcc ctgtccacct ctaatgaagc cccgtcaaac aagaacatgt gatttgtctc       180
tgactgccaa gaagatcgac acagactcca gaatgtcagc cgctctcaag ctattagaac       240
ctttaaagta caaagcacct tgtaatcctg cttaccgtgc agcccaaagc gtggcccatt       300
ggcacatggg aaacatcacg ccacacgggg gacagacgct ccctgaatgt aatagctcct       360
gccatcttgc cagaaaagtg aagaacgttg gtggtaccac ccttcctcgg agaaccttca       420
cagccagcag tgcccacctg ggtttggagt tcaacaaagc ttctacccct aatgccagca       480
cactgcatnc agactcatcc agtgctggag gaggtgaaga ggatgtagag ggctttgat        539
```

<210> 53
<211> 181
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(181)
<223> n = A,T,C or G

<400> 53
```
actgaggtct ttggatgcag cccagggncg caccaaatca tgaagatctg ccttaatcta        60
ctgcgtcagt gctcggacta aaagactgtg ccaacacacn annctatcat gaaacttttt       120
ttgtcnggng acaggatctn gatagaacag gctgcccctc aactgggttg gctagtagag       180
g                                                                       181
```

<210> 54
<211> 203
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature

<222> (1)...(203)
<223> n = A,T,C or G

<400> 54
cctatgtgag aagctcngag ggtgangcac cgtttcgaac tctgcagtgt gcaatgaaga   60
cgaggaagtt ccagcatggc ctcgggggat gttggctaag ggacagagcc cgaaagagtc   120
cttcacagag accacatatt tatctccctg gatgctttat aggccttaat aaaaaaaatat   180
caaaatagtc tataaaaaaa aaa   203

<210> 55
<211> 238
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(238)
<223> n = A,T,C or G

<400> 55
tgcctccatc acttgcaaag aaattgttcc catggtgnta cttgncattc tatttcccaa   60
ttactctacc gccctcctac ttggcatgtg nttgcccagn tcacaggaga tggactattt   120
attaaaantc ctgaatcaga gaaatagggta tctcaccagt cttgntgccag gaggaaggga   180
ancatgtctc accanaacac agctacatcg cctaantcag gatgaaaact ttattttta   238

<210> 56
<211> 133
<212> DNA
<213> Mus musculus

<400> 56
ggaggctgat ttttctttgc actggacacc accctgttag ttcctttggg caatgggaa   60
gtcctgtctg cgggctggat cttctaaaag caaaagtatt aaatgtttaa gagttttcct   120
ttaaaaaaaa aaa   133

<210> 57
<211> 292
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(292)
<223> n = A,T,C or G

<400> 57
ggccatggct gggcttgnac ttcctcctgc agtccgggan gatcctcttn cctcagccct   60
caaggnagct gngacgatag gccngaccta ccatgccagc ctgattcccg tgaaactttg   120
ngaaccaaan acttntgctc tnataangag cttaacantt cttnctgtnc aaancttggg   180
ctanaaatgg ngtngtggtt gangactatg ncaaagaatc tcaggcccna ggatgtcatc   240
gaggaatact tcaagtgcaa gaaataaata aattttggct gaaaaaaaaa aa   292

<210> 58
<211> 496
<212> DNA
<213> Mus musculus

<400> 58
ctgagcccca ccccagacaa ctccttcatg ggcttcgtgt ccgaggagct caatgagacc   60
gagaagcagc tcatccaaga tggcaaggcc agcaacatgg cggtggtgta cggcaaggag   120
gcgagtatct ggaaggtgag ccccagcaag ccactgcca accacaccgg ctccaatgcg   180
ggccataccc acaacacttg ctgagtgtgt gtcacaccca cgccagtacc agacacattc   240
actgtacctt ctgtgccttc acaaggacag gccacagccc cttctgacac aagccgtgtc   300

                              15

```
caccgcactg ccaccaccac ccaagcatag gccacagcca cacagatcat ctgcatgcca       360
gcgctggaca cgcctaccgc acctggttct ggtgctgatc acccccataa ccaggaaggc       420
tccagccaca caatgacagg gcttacctag ccaaggccat gcctctgcag tccatgcctg       480
aagctgcagg cacagg                                                       496

<210> 59
<211> 172
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(172)
<223> n = A,T,C or G

<400> 59
gactgaggtg ggtttggnct gagtatacct gngcaggagc cataattact tcttgtgtaa        60
ctctcaaang ccaggacagg nggcctgggc ttggctccat ancncnatgg cactnnaagg       120
tcacnacttt ggctcgngaa ttcccnagtg atggggaata tatttaaaaa aa              172

<210> 60
<211> 162
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(162)
<223> n = A,T,C or G

<400> 60
gactgagtcc cagaaatcct ggntaggagg gcactttgac caaggaggga gtgtgtatat        60
attataccaa gctccaaaga ccctcacaga tgtcttccag gatgtcagat ttgtcagcaa       120
cttgtcagat gtttctgtgg tcgtttggtc aagaaaaaaa aa                         162

<210> 61
<211> 163
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(163)
<223> n = A,T,C or G

<400> 61
gcaccaaact tgagacgagg gattgttcct ggcctctagc cctcctcaca cccagtttta        60
tttattggtt tggctcttgc tctgagaggt ctaatctcct ctcaattctt cctaaactgg       120
gctgcatgct gnctgagcac aggaaagata gcaggaatgg aag                        163

<210> 62
<211> 189
<212> DNA
<213> Mus musculus

<400> 62
tgaggacccc cacggcacga gtattctgtg gccaggagcca ccgcctcacc ctcctctgca        60
gtctctgtca cataggcatc catggagggg ctgtccaagg cttctacata actccagaat       120
tggaagatgg tgaactgctc ccccgggcct ggttggggcc tcctgggcag cttctgtaag       180
aaaaaaaaaa                                                              189

<210> 63
<211> 124
```

16

<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(124)
<223> n = A,T,C or G

<400> 63
agtttgacaa ccaaaatgag nacagacttt accnatatac atcgaggatg aagagacttg   60
ctcccagtag agaaccactg gtcttgntct ttaagagtct gttctgactt tcctaggacc   120
actt   124

<210> 64
<211> 229
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(229)
<223> n = A,T,C or G

<400> 64
tgaggtgggg tctttcaagt gcaaggcctg gtgtgtacaa caggatctct tagaaagaag   60
cacagctgtt ttcctgcagt ngcggccccg gaaccacacg accggcagct ccagccccag   120
accacagctc gctggatttt cagaagttcc ttgggccaga agtgccagcc agatcactct   180
ttctctcagg tcacatatgg tacataaatc actttgcaaa agaaaaaaa   229

<210> 65
<211> 190
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(190)
<223> n = A,T,C or G

<400> 65
ataagcagat cctggtgatg tgtgntcatt actgagagat tcctctccca cccacacaaa   60
ctgtatntac agggtgggga cctgctggnc acaggcatgc caatactgtc tgaagactng   120
tatttgcatg anaccnttga cactgatcac ctctcanctc aggcctgact ccaaccacag   180
ggaggagatg   190

<210> 66
<211> 331
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(331)
<223> n = A,T,C or G

<400> 66
gactgagact tggagcaaga cttctttaca gcccaacact gaggttccca ggtacgagnc   60
acaaggaagc catgtgattn ctgngtcgcc cagaggctct gcagcccctg ccctcctct   120
ccaccgagct cccttcacag gattgcacct ctgccagcca ggaggctgga gtgtagatgc   180
tctatgaggt ggctgtgcca gaagagccac gccaaggcca tcttggagac tgaaaggagn   240
nngnttggcc cacactctat ccctgcccac gcacctttgg ccatgaactc cgtgacaata   300
aagatgggct cctgagagac caaaaaaaaa a   331

<210> 67
<211> 239
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(239)
<223> n = A,T,C or G

<400> 67
gttccataat gggagtggtg agcnggggcc ccctactgtc accccgagga gcagtataca   60
ctcggggcaa cggccctgcg gtccgtcatc atctttgctg gcttccagac agctccgatt   120
cagacgtgga ggaagtgacc atggaagana nncccgtcat ctcccgacct ccccagacga   180
atctgcaaa cctacgcagg ggctggttag cctccccagg acccgggatc agtcaagaa   239

<210> 68
<211> 112
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(112)
<223> n = A,T,C or G

<400> 68
aactgagaga ccctgggaga aggtcaacaa caagaatgan ttgagtnntt gnnnaatacc   60
cnncagggnn gtgttacaca cttnaagggc gtgggtcttg tgcttctcac tg   112

<210> 69
<211> 113
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(113)
<223> n = A,T,C or G

<400> 69
agttaataag gggggngctg gcggacaccc tcagcctgac ngtgcattga tcccgacttt   60
gtcagatgga ctttnaagac ctatttcaat gaaatggttg agaataaaaa aaa   113

<210> 70
<211> 617
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(617)
<223> n = A,T,C or G

<400> 70
ctccctggac acctcaagga agatggttct tcatctagaa ggccttccat caatagccag   60
gtagcctgag ctacatgaca agatcccgac tcaagacaaa cagacctcat atctagtcat   120
cataattatt gtttatttag acttgctccc tcctccctct gatttcccag gagcctgtgg   180
gtatcctcag tctctgagaa aataacagcc agcatctggt acaggggctc tcggtgcttc   240
tccagtgagg caggaacaga taaatgagaa aaggaaggaa tcaggttgaa ggcttccgct   300
gccatcttgg atgaagaggg atccagaatc cagcctggag gtcatgtgat gctctcgaca   360
tttccaaagt gcctcttgtt gcttctcacc acaaccaaga gatgcacaag gaaaggaagc   420
ccataccctg tagtttgcaa gcccccagtg tgccgggagg gacctgctca aggtcagaga   480

                                18

```
ggagcagaga ggctggaaag ccctgactcc ctgggctaag cctgggttca ttctacttnc      540
ttcaccagct tcgagtgccc ctggaaacac ctggcacgac aatcgggaaa taaaagaact      600
ncatggctta aaaaaaa                                                     617

<210> 71
<211> 182
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(182)
<223> n = A,T,C or G

<400> 71
gactgaggtg ggtttgggct gaggnaaacc tggncagcag ncataannac ttcttgagga       60
actctcaaag gncgnacnnn aggcaggnan ctactgctgc tcacccnttg agagacttac      120
ccggtgcttg cctgaactgc aataaaggac tcatattatt gagcaggact taaaaaaaaa      180
aa                                                                    182

<210> 72
<211> 221
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(221)
<223> n = A,T,C or G

<400> 72
actgaggccc aaggaagcct ctcctctcct gtttccagng tgatcaatca ccaatacaaa       60
ggagttcatg tgacagctgg gccactttta atatgaagca cttattgaat tatannannaa      120
acatnccgtt ctgnntgctc agcgtccagg accccgagg gaaggcacca tctccacaga       180
aggnccaaca tctttgtaga agaaaagcca actgggggaca g                         221

<210> 73
<211> 126
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(126)
<223> n = A,T,C or G

<400> 73
tggccttgaa tttacagaga tccacctgcc tccttctcta gagtgctggg attgaagcac       60
cactctggct aattacttct ttgtaaataa actngcacaa acgtcaccac cacacacaaa      120
aaaaaa                                                                126

<210> 74
<211> 190
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(190)
<223> n = A,T,C or G

<400> 74
ggtgagaaga ggagtttgaa gtgtttactc tggactatga actgtgttgn actgggatct       60
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```
aggattcaag tgctaaatgc acagtccatc cttgctttct ttggatattt tgctcaagna      120
tgtatgtgtt gggtttgagn acttatattg tagagtatgt caaataaata ttgatttacc      180
aaaaaaaaaa                                                              190


<210> 75
<211> 192
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(192)
<223> n = A,T,C or G

<400> 75
agactgagtc ctggtacctg ntgtngccgn gttgccttcc ctccctnctt ntcannnggg       60
gantcccagg gngaccgnnc cagcctgcat ttttggtgga aaattagatg gagtgagaag      120
ccccctgcgg actcccagct ggatggaaaa gacaggagga gaaaaggaca aagacaaaca      180
ggaaaaaaaa aa                                                          192


<210> 76
<211> 107
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(107)
<223> n = A,T,C or G

<400> 76
cccattatgg gctccactat gttggncgac acctctgnct cctgcaggag atatcgggng       60
nggcccngag cctctgtcnt taaactacct catgcttttta acatcaa                   107


<210> 77
<211> 401
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(401)
<223> n = A,T,C or G

<400> 77
gactgaggct tgcactcccc gggggntctg cctctgcntc tcttgccttc gctgttgttt       60
ccctctctgt ccagctcccc tcccgntctc gccctggaga atggctcaaa aggagaacgc      120
ctacccgtgg ccctacggct caaagacggt aaggtcctgg ccacattccc cgccccacgt      180
cccccggaag aagagtccat gaagatagag gctggccttg caaatgccg gactctaagc      240
gtntncgacg tgtgggcctc aagaatttgc ttgcaaaact cagtctgatc acttgcagtc      300
ttaccgtagc agatgttgcc aacctgaatc tgagggcttc cgtagagctg agcctgctcg      360
tcacgtacaa taatagttgg gactgagcaa acatcataaa a                         401


<210> 78
<211> 127
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(127)
<223> n = A,T,C or G
```

<400> 78
agaagaacaa cgtaananaa tgantgcttc tctggtaaaa cannggggag gggngntatta   60
accttcagg atnctgtttt tcgcacttct catcannaag aatgggaatg tctcaatttt   120
gctcaga   127

<210> 79
<211> 145
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(145)
<223> n = A,T,C or G

<400> 79
ctgagtgtga tccctgggac ccacatgatg gaanagaana gagcaacctc ccataaaactg   60
ncctctgact tctacaccaa ngctgtatgt agcatgtncc cacacacctt catgcgcata   120
cacaacgaaa ataaaaagca aaaga   145

<210> 80
<211> 110
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(110)
<223> n = A,T,C or G

<400> 80
ggattctagg gaatgacana atttcctgga ngatgaatgg agggnggnna tgntaccctg   60
tgcctgacgn aggcantaac cgtgncagat ngtgacaatt tagaaaatat   110

<210> 81
<211> 322
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(322)
<223> n = A,T,C or G

<400> 81
tgtaaaggga aataagggac ggcctgaaca gacttcctgc tnctnctgtt ggggnngggg   60
gngatggcca cagttaacaa aggcaaacca caactaagga aaaaggtaca tccagcantg   120
gctaattcca caacnaaagt catatcggaa gaaaagatgg ngtcgtttct ttactttnaa   180
nataacccag aggtcatant aaacaatang ngggagatc gaaaggctct gctatcacag   240
gntccagtgg caaaaggnag tgtgcagact tggggcccaa naattgcatn ncaacgcaag   300
cagcattgca tgattttggc ac   322

<210> 82
<211> 108
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(108)
<223> n = A,T,C or G

<400> 82

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gactgagcct gcctggatgg cagtgagcct cagttcgttt aggtcgtctc tacctgttca        60
gcttcagtga gcacaacacg ggtaaacctn tgcttgagct cgagtcct                    108


<210> 83
<211> 277
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(277)
<223> n = A,T,C or G

<400> 83
actgaggtgt gacgaagaac agtctctgta catgaagacg aagacgactg ctctgggctc        60
aggtatatct naaccttggn tctgatctgn gagaaaaaga gaccacctgg atctggcatc       120
ccggnttttg aatccaaaca tcctctctct gaggntnttt ctcctnaggg aagnttcccg       180
ctngncagct tnganatcct canaagagag ccttgnattg gaaacgtctc cgttaaangc       240
gataacatgc ccttcgntat tcaccacaaa aaaaaaa                                277


<210> 84
<211> 133
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(133)
<223> n = A,T,C or G

<400> 84
actgagaaag ctgtttttt taatttgat tttctcaaga cataaagtga aggctgcttt          60
tcatctgtct gcactatcgg nntggnngnn ncganngcca aactaaccgt atataaccct       120
aggaaacttt taa                                                          133


<210> 85
<211> 332
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(332)
<223> n = A,T,C or G

<400> 85
gggccttgga gcctagaatg acagcaaagt aaaaccagtc tcaactcctg aaggctctcg        60
nnctgcacca ggaatgcgtc catagccaga tcctgcaggg gagacctgac aagatgagag       120
acagcacaga cttggaagcc ccgcctcctc tgtggatctg aaggctcctc tgtagaaaag       180
acaggacctg gggcctgaga ggcgaggccg ctcaacaaca gaacagctca tgatgaagct       240
gagtctggcc tcgaactcgt ggacttgcag ccctgagcaa ccatgcctgg cttggcttta       300
ctgttaaaaa tacttctctg taaaaaaaaa aa                                     332


<210> 86
<211> 327
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(327)
<223> n = A,T,C or G
```

22

```
<400> 86
actgagggca gcatcgcagg cggcccaang gcaggggagc gcggggcaag ctcacttggg        60
tcctggaaag gccaaaggcg ctcagaagcc caccgcccag gacttgcgac aagctgggcg       120
gcggccgaag acagtccttg ngagagatgc ccagnatccg gcggggctgg cttcgcagat       180
gcccggtgcc canccaggct gtccgctgag atgcccgtgc ggctgcttga tcggctcgga       240
gcagcttccc ccaggaatga ctccagccgt ctgggaagca aggagggaca gggtttggag       300
caataaaatgt ccccaaggcc cgaaaaa                                          327

<210> 87
<211> 182
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(182)
<223> n = A,T,C or G

<400> 87
accgaggact tcagggccct gnanaagact gttgaggaca tnaanntatt ctaanccacc        60
ctcctgntct tctttctcct nctgtcccnc atnatnccca tggaaagcct tgcctggact       120
attctntcat gcttnggaac tntctggatt tctacnctca nanacatgct ttgtactggc       180
ta                                                                     182

<210> 88
<211> 198
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(198)
<223> n = A,T,C or G

<400> 88
agatctcata cacagttgcc aaactgaatg ctgccatttc agaacgtgaa gaggntanag        60
ggagannnga nctgntttat cctgttanng tagactgnaa gctatggcaa aagagcnanc       120
acaagagctg acacccagatg tnnacaangc ccatgagttc tcnacctgan gctngatact      180
tcctaattag acgacaga                                                    198

<210> 89
<211> 409
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(409)
<223> n = A,T,C or G

<400> 89
gggattctag acctggatga catcctnngg gacggngctg atgacaaaga cagactggta        60
gcagtatttg atgaacagga tccccaccat ggaggagatg gtaccagcgc cagctccacg       120
ggaacccaga gtccagagat attctggcag tgagctgggc accaacaata gtttctgctt       180
ttcagcctta tcaagccaca agtgaaattg aggtcacgcc ttnagttctt cgggcaaata       240
tgcctcttga tgnccngccg gagcancgac ccagctttaa ctggcctttn cacttctgtc       300
agtgatanca actnttccta agaggagncc tccaggaaaa accncgaccc gntggtccac       360
gacagctgn tttctcaagc aaacaccngc tgggaagtcc caaatcctg                    409

<210> 90
<211> 103
<212> DNA
<213> Mus musculus
```

```
<220>
<221> misc_feature
<222> (1)...(103)
<223> n = A,T,C or G

<400> 90
tgctaaatcc cacacagtaa taaatccggg acctcctgan acagntgncn cangagcncn        60
nggctttatt nttgaagcac cttccacccc caacttcctt gac                         103


<210> 91
<211> 104
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(104)
<223> n = A,T,C or G

<400> 91
cctcatgcta atgtaatgca cggcncnnac cctgacccag tgactactgg tgggccatag        60
cnngctcacg ntgaagccct gcacaccctt gacctgagct ggat                        104


<210> 92
<211> 239
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(239)
<223> n = A,T,C or G

<400> 92
cagaagacat cccaccacat ggnccctgtg tttgtcctga tgagcgcctg cctggccacc        60
gcaggtaatg caccttctca attgggaggc tcttaacctt ctcttgaatt cctatttcct       120
tctcccctca gtctctttgg ctaaaaatat ttagtccata ttatcttatg taaaatgtga       180
atatttatgt tatttaggta aataaaatat ttgactatca tactgtataca taaaaaaat       239


<210> 93
<211> 322
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(322)
<223> n = A,T,C or G

<400> 93
gagtgctggg acttgaaccc agatctcagt gtctactaca ttctcaaccc tgcttctcca        60
aagacagcgt ctcanctata ctctgtagcc atggtcagcc tggaactccc aagagatctg       120
cctccggagt gctgggatta aagatttcta ccactacacc gtggccttac aaacggaggg       180
gataggacat catttaattc ctgaagagtt cctcagacaa tcagttctta ggccatccac       240
aaactgatca cttggtttgt tgctctcctg aatgtggctt aatgaaatta aatgtagttt       300
ctgccccagt gaaaaaaaaa aa                                                 322


<210> 94
<211> 359
<212> DNA
<213> Mus musculus

<400> 94
```

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atccctgcgg tgggtgggaa ggagctggat cttcacgggc tctacaccag agtcactact        60
ttaggcggat tcgcgaaggt ttctgagaag aatcagtggg gagaaattgt tgaagagttc       120
aactttccca gaagttgttc caacgctgcc tttgctttaa aacagtatta cttgcgagcc       180
ctgggtccag tgcccagcat ctcatagccc agatctggtg gcacatgcct gtgattacag       240
cactgggaaa gacatgagag cagagaggaa aggacaagag aagagaaaat ggtcacctta       300
taagtgtttg ctgtaaaaaa gtttttatca ttaaaagatt ttaaatcaca aaaaaaaaa       359

<210> 95
<211> 116
<212> DNA
<213> Mus musculus

<400> 95
gtaacatctg cacctggttc caggctccaa ggatgaattg gtgggaatgg gcctccccc        60
aacttttata agtgcattct ccattaaaca tttgagcctt gatcaaaaca aaaaa          116

<210> 96
<211> 271
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(271)
<223> n = A,T,C or G

<400> 96
tcccaccgct cgaggctcac attgggttcn tgaagtatga tcaanggntc ggcttnctct        60
tnttacntga cacttncttc cctgnncgac agggcccgtn gctganannn acctgaagat       120
gagatncana ccctgganat atggnggcgc angccactgc ngctgcagga gatgngcact       180
gtcgttttat gtttcctaga tcagaaccan gctacagccc aggaaacacc tgtttctgta       240
aataaagttt tattagacag aaaaaaaaca a                                     271

<210> 97
<211> 165
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(165)
<223> n = A,T,C or G

<400> 97
actgaggagg ctaaagcaga agggtcactg ntacttgggg agtgacttca aggccagctt        60
caacaactta gtgggaccct gnctcaagta agtaaaaaga agactggaat tatagctcaa       120
ttatagtaga acacttgccc attatgtatg agaaaataaa agaaa                      165

<210> 98
<211> 307
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(307)
<223> n = A,T,C or G

<400> 98
tggatgcagg tccaaccaac ggatcctntg nggtccaaac ctnntcaaac caggagcccc        60
cgangncacc gccctgtgag cctctncttg cggatgcccc accagcccgt cacaagctgt       120
cacccgagtc tccagaaaat tctctgggga gacctnagnt tcagctctgt cacccacatc       180
tgctgccatt gtggggggct tcaccccaag ccctagngag gcgcatcagn ccttggactc       240
```

25

```
ccagacccac tgaaaaaagt ncntctttca ctcaggnctt tgncttggnc tctgggtatg      300
ggagcag                                                                307

<210> 99
<211> 354
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(354)
<223> n = A,T,C or G

<400> 99
ctcgagccaa gaacctttcg cccgccccgc ccgcgcgacc cgtcccactc tgcgcccngn      60
ccgngccgcc aatggaaaag ctgcaaatgg cgcgaccagc ctgccgcggg cgaccggcag      120
aaattcggtg tgtgcaagcc cgggaaggct ccgtcagacc tggaggtggg gacagcgtgt      180
tgcaggcccc ggggagatgg cgcctacacg cngnncggcc tccatctctc ccaggttcg       240
ccaagccacg gcgcagccaa ttggctcgga gacatggcgg ggtgcctttt cgccttggct      300
ctctgcggca ctctgctgcc gataatcgac gccttggaac tggaaaaaaa aaaa           354

<210> 100
<211> 370
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(370)
<223> n = A,T,C or G

<400> 100
gcttctgcta cttctgcctc attgttccgg acncacggng nagnnatgct ncnangactn      60
ttttatcaat ttggagntgg aancncaccn cgcncgncct ttnattagnt agnctggtgg      120
catcaaccat tactaccttg naggntttga anggattagc cccatancct gggggttttt      180
actttttcca gacaagntct caagnatccc agggnggctt cctgactctc tcnagtancc      240
gaggataacc atatacttct gatcccacct gnacctnctg agtcctgttt taatggggng      300
ctgagactcg aacccatggc ttcncanatg ctangcanac gcttttcgag ctgagctcca      360
cccccagcct                                                            370

<210> 101
<211> 104
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(104)
<223> n = A,T,C or G

<400> 101
ccagcctggc ctacattgag aaacctcatt ttngnaaagn naaatacttc gtcaattaac      60
atcgcanntg gttcaataaa gactttggga aagtgtcaaa aaaa                      104

<210> 102
<211> 261
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(261)
<223> n = A,T,C or G
```

<400> 102
atgtctgact gcacctggga ggaccctatg tcgcaaatng gcttatttcc cctncgnaga   60
cctantcaca ngtcacncag tnnngagcgt tcggtacaga tttccgggan ggaacacaca   120
ggtcatttgc gcccgaaact tgcncgtgtg cttggcgcat ttcctgcatc ctggcgcgcc   180
tcctccctcc ccacctncct tctccgagcg ncttaagccc aggcctccgg cctccgtctc   240
tgagggtcct tgggggggcg g   261

<210> 103
<211> 330
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(330)
<223> n = A,T,C or G

<400> 103
cgaggagaag tacttgactc tttatannan tctgannnat cttggacggg actatncann   60
aggagcaggc tattttaaaa ggcgnnngna gancgcttnc cntancttca aggatgcgga   120
ggacccanan aanatcactn nacttatccc acgaggagan cttgcattga angagctaga   180
ngccntgccc ttncttanga aatacagagc nctgntgctt acgttactat tcagatncca   240
aagtctgacc aatcattgca ccagtcgagc tgacaaccag tgctggctgt ttgcctgtac   300
caactattaa aaaataattc agtttaaaaa   330

<210> 104
<211> 107
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(107)
<223> n = A,T,C or G

<400> 104
ctgacattat gggattgcag actaagaagg ncctactgac cccctcata catccagctc   60
gccctttctg agtttcaaac catgaccgaa gtagtgaaaa aaaaaaa   107

<210> 105
<211> 129
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(129)
<223> n = A,T,C or G

<400> 105
aactgagatg tctgagagca aacaggtacg aagacagcgg gaccagtgcg tcactcagta   60
aagcangcaa agaaacttcc tgtaagcgac aaantagaga agggtcctgg gactcttcac   120
tggtgatga   129

<210> 106
<211> 128
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(128)
<223> n = A,T,C or G

```
<400> 106
tgtgttgaca gtgtttnact cgaggatttg ngtacnagaa acatcagngn gatcacactc        60
acgaaataat ggnacnggag acattgatgg aaantttcat tcctcttatt catgattcag       120
actgagaa                                                                128

<210> 107
<211> 120
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(120)
<223> n = A,T,C or G

<400> 107
acactgtgca cctttactac tggaccagag attattcgcc cggnaattgg ntnccntncc        60
ccttgcttca taactgagtg tngcaacagt gaaanattgga gctttgatca gaaaaaaaaa      120

<210> 108
<211> 255
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(255)
<223> n = A,T,C or G

<400> 108
tacagggaat caggannccc tcccccttcc ttcatanctg agtgttgnaa ctannnggan        60
tgcagctnan gatcanatnc tgaaganaaa ctctatgaat atagacaatg nggtaaagtt       120
tttgcatgnc acagtcatct tcaaagncat gaaagaattc gngctggaga ggaatcctgn       180
gaatgtaatc aatgtaataa tcacagtact cttcaaaatc ctgaaaaaaa tcatactgaa       240
gagagactat atgaa                                                        255

<210> 109
<211> 155
<212> DNA
<213> Mus musculus

<400> 109
ttacgacagg aagaagcctg acataagcca gttacatgct catcacccct gcgagaatgc        60
tgtgcaggag ctgaagactt gctttcagtc ctcatcctac agtgactgcg gcaccggaag       120
tcctggtatg ggttgaacaa accaccagcg ttaaa                                  155

<210> 110
<211> 404
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(404)
<223> n = A,T,C or G

<400> 110
tgagggaaag tcatggaggc ttcaggntct tcttcccagt ctcaagacag tggtggagtc        60
cacagggaaa cggaagatca ctaccaagga gacatgagct ccacnagcat catgggaagg       120
cccggnagcg atanangaga gacaggtntt nctcttcatc ctcatnctcn gcatcttctt       180
cctcctnttc ctcctnatct tcttcctnct cctnagncng cntcnatgan gaccagncct       240
ncntaggtcc cagnnnncac naaaggangc cccncaggga caganttgcg tggtgcatga       300
ccatggngaa ctgnaagngc taaaggacga gcttnanctc tgcgnaggtg ctgctgcgga       360
```

```
aatggtncct actggcgagn caggactcct aaggagaggt tacg                    404

<210> 111
<211> 108
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(108)
<223> n = A,T,C or G

<400> 111
gacatgatac ggatgnccgg attcanctgt taaagcagtt actggaggac tccacctnan    60
atgacgacgg gagcagctcc agctcctcgg gggacagaga gaagcgca                108

<210> 112
<211> 485
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(485)
<223> n = A,T,C or G

<400> 112
gactgaggta aacttggnac cgntcaanag gtagtggatc tnacagaccc canccgtncc    60
cgcttcactc tgcaagagct ganggaggng ctgcaggagc gaaacaagct caagtcgcan   120
ctgctgctgg tgcangagga actgnagtgc tacaggagtg gtctacttcc acccanagan   180
actncaggag gaagaagaga gaaggatgct gtgggttgcca tgggcaacgg cgagaaggag   240
gagaggacca ttatgaagaa gctgttctct ttccggtcag ggaagcatac ctagactgaa   300
aaccatcacc aagatggtga ccctcttgac ttgagaagac aattgccaat atgccttctg   360
gaaccacctt cctgtgtcag gaatgtgcct tggcttgctc ctgcacagag cagtcagagg   420
aagatgctcc ctcccatggc tcacctgctc tctgggggaca gacctggaca gtcagtaagc   480
tttga                                                             485

<210> 113
<211> 378
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(378)
<223> n = A,T,C or G

<400> 113
ttttgctgat cgccttgcaa gttttcatcg agtttggagt ttcccaccaa atgaaagtac    60
aggaaaagaa gtgacctgct tggcctggag accagacggc aaacttttgg cctttgctct   120
tgcggatacc aagaaaatta ttttgtgtga tgtagaaaag cctgaaagct tacactcctt   180
ctctgtggag gctccggtct cttgtatgca ttggacagaa gtgactgtgg aaagcagtgt   240
tttaacatcg ttttataatg ctgaggatga gtccaatctt ctcttgccta agctgcccta   300
gacccggacg tantcatcaa agtggagaaa cttgaccctg agttggactc gngacccagc   360
ttgacagcat tgcgttag                                                378

<210> 114
<211> 136
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
```

29

<400> 114
tgtagaagag acactggcgg ccagcttgcg cttgggggga aacgattgaa catagtatng   60
gggctccatt tnactaaccc aggctacatt gncganaact aacagcntga agntcctgac   120
ggccttcctg ccagtt   136

<210> 115
<211> 331
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(331)
<223> n = A,T,C or G

<400> 115
aactgaggtg gaaggacaca tacgctgacg ngctggcaat gcgatccatg gtgcggttta   60
ncggaaggat ctagagacna gtcagctgac cctgagtagc caatgagaat tctccagttg   120
ctgctttaaa ttagagccgt ggccattaca ggagccgtca ctttgcttgc ctgccacgga   180
atccaggctt gtgcacctgg agatcccttg gggcccgatg acctgaagcc ttcccccagg   240
aaaaactgaa gcctgaacac tgtctacttt tcctccatct ttctttctct tagatggtga   300
aataaagaac tatcagacag caaaaaaaaa a   331

<210> 116
<211> 461
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(461)
<223> n = A,T,C or G

<400> 116
gctgccaccc tctggaggnt cccgagtcct ttgtggntct gngngaaaag actctgtgta   60
cantgtgcta cnganccnga gngcggcatg tnctgtacct cnttgatttg cccanaacct   120
gcgcccagga nggtctggtg ctgnactggn tggactgacc acagtgcctg tcgtccagct   180
tgcccagctg gcatggaata taaggagtgt gtgtctcctt gccccagaac ctgccagagc   240
ctgtctatca atgaagngtg tcancagcaa tgtgtagacg gctgtanctc gccctgaggg   300
aganctcttg gatgaacacc gatgtgtgca gagcttccga gtgtccttgc cttgcacgct   360
gggaaagcgg naccnctccn ggcacctncc tnttctcngg acttgtaacn ntttgtatcn   420
gcngancagc ctatgggatnt ggagcaatgg aagaatgccc a   461

<210> 117
<211> 124
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(124)
<223> n = A,T,C or G

<400> 117
tgatcattag gaactttgat cagaatagan ggagcagagg tnctaaactc nattcnccag   60
agggcntgat gaatctntgt ntcagctnca gtnngtactc atctactataa aataaatgat   120
taaa   124

<210> 118
<211> 261

30

<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(261)
<223> n = A,T,C or G

<400> 118
tttctactgg accactatat tattgggccg gganatctnn ntcccctncn cntngcttcn   60
tnactgattg cttcatnagt ganagtggag ctttgatcat tgnagctttg atcagnattt   120
nnacnanaga cntttgnccn atatccnaag gngngggcat actggagaga aaacttatga   180
atgtaatcaa tgtggtaaag cttttgtaag acccagtcaa ctccaaacac ataaaagaac   240
acattctgga gagaaaccct a   261

<210> 119
<211> 391
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(391)
<223> n = A,T,C or G

<400> 119
cagggaggat agccgatata tncttantga cagcttcnnc nncngtntng anactgncac   60
agctggactc tggngaccac tnacnntatg ggnantgatt gccttttcnnc gncaacagcc   120
cttccnnttt ntnctacagn ttgtggngnc tatgggccag atatacgdng atgagctgta   180
cttcctgaca gagctacacg aaggactcca gcatggggag ataggncacc ccgtttattt   240
ctggttctat tttgntttcc tgaatgctgt atggntggtg ataccaagca tccttgtgct   300
tgatgccata aagcatctca ctagtgccca gagcgtgctg gacagcaaag ncatgaaaat   360
taanagcaag cataactaaa gagccggaga g   391

<210> 120
<211> 326
<212> DNA
<213> Mus musculus

<400> 120
ctaaagctcc aggaaataga aattcctgaa gggacacgat tacaaagcag acagtcagtt   60
ccttgtggaa atcatggaaa tcaatgaaag actcgcagac gcccaaagtg aggccgccat   120
ggaagagata gaagccactg tcagagctaa acagaaagaa tttactgaca atataacag   180
cgcttttgaa caaggtgact ttgaaaaagc caaggaactc ctgacaaaga tgagatactt   240
ttcgaacata gaagaaaaga tcaagctaag caagactcct ctcttgttgc taacttaaag   300
ttttagaaat aaactttgta tttctt   326

<210> 121
<211> 452
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(452)
<223> n = A,T,C or G

<400> 121
gtggggtctt tcaacttgcc gggaggagca caagaagaag cacccggatg cttctgtcaa   60
cttctcagag ttttccaaga agtgctcaga gaggtggaag accatgtctg ctaaagaaaa   120
ggggaaattt gaagatatgg caaaggctga caaggctcgt tatgaaagag aaatgaaaac   180
ctacatcccc cccaaagggg agaccaaaaa gaagttcaag gaccccaatg cacccaagag   240
gcctccttcg gccttcttct tgttctgttc tgagtaccgc cccaaaatca aaggcgagca   300

31

```
tcctggctta tccattggtg atgttgcaaa gaaactagga gagatgtgga acaacactgc        360
agcagatgac aagcagccct atgagaagaa agctgccaag ctgaaggaga aagtatgaga        420
aaggatattg ctgnctacag agctaatgga aa                                       452


<210> 122
<211> 415
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(415)
<223> n = A,T,C or G

<400> 122
cttcttgaga gatcancctt ggtgaanagt tnctagcaca caggtgacta cgagaagggt         60
ntgnaccanc tgtcaaatgc cnttgctgtg tgtggacagc ctcagcagcc tgntgcaagt        120
gtnacagnnn actctttcgt cnccagagtg ngcnnatgct tgtnaccaag ctttccgacc        180
atnagtnaga gaattgnnag ngctcaaagc tnggntnnag atgatgtgga atgagccaga        240
taccaacaag atanaatctc agtanaataa tctnaacnnt taggcttgga agctggtcan        300
ctctgggggga ttaagggcaa attatgctgt catgaactgt cccacactga cgtnctgcca        360
aagcgaatat gaactttggt nagacccatt gtctggncta tttattttc cagta             415


<210> 123
<211> 427
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(427)
<223> n = A,T,C or G

<400> 123
tccgtcctag aactgacaag ccagattctg ggagccaacc ctgatttgc caccctctgg         60
aactgtcgca gagaagtgct ccagcagcta gaaacccaga agtccctga ggagttggct        120
gctcttgtga aggcagaact aggcttcctt gagagctgtc tgcgtgtgaa ccctaagtcc        180
tatggcactt ggcaccaccg ctgctggctg ctgagtcgcc tgcctgagcc caactgggcc        240
cgggagctgg agctgtcgcc tcgcttcctc gaggccgatg agcggaactt tcattgctgg        300
gactatcggc gattaaccaa nggnnagnct tttgttctca ctgcananta aaataatcaa        360
nactgacagc ctgaccaccc ngaacttctc caactattct tcctggcatt atcgctcctg        420
cctattg                                                                   427


<210> 124
<211> 260
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(260)
<223> n = A,T,C or G

<400> 124
cctgggagcg ttctgggggc attgggcaac cccttcact ccttctgagg aacanatgat         60
tgccgaggct attcctnntc tgaaagcntc catcnanana ggcagangac tttgnnaaga        120
ncatgaantg agaggngaga gcctgganca ggatcccnng catcntncta acttattcaa        180
tcatcntgtc tttggaacca ctngagaatc tatttngcgt ctgatggagg gtgtgnagnc        240
agnatcatgc atctcttcca                                                     260


<210> 125
<211> 414
<212> DNA
```

<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(414)
<223> n = A,T,C or G

<400> 125
ctaacgtaca gaacagcttg caagttaccg atttgtacag aagcgatgca accttcatct   60
tgttgatatc tggaatatga tcgaagcttt ccgagacaat ggccttaaca cgctggacca   120
cagcacggag atcaggcgtg tnccgcctgg agaccgtcat ctcgtccatc tactatcagt   180
tgaacaagcg ccttccttct actcaccaga tcagcgtgga gcagtccatc agtctcctac   240
tcaatttcat ggtcgccgcc tacgacagtg agggccgagg cangttgacc gtgttttcag   300
ntaaagctat gttagcaacc atgtgtggtg gaaaaatgct ggacaaattg agatacattt   360
tctcccagat gtcagattcc aatggcttaa tgatgttngg aaagcttgac cagt   414

<210> 126
<211> 146
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(146)
<223> n = A,T,C or G

<400> 126
gcttgctgac aaagaagctg ccgncctgac catctcancct ctcagacntn angctgngga   60
ccatananct anngacactn aggntgntgg agacctcacc caggaagcct ttgatcttat   120
aagtaaaggt atgcgaaaaa aaaaaa   146

<210> 127
<211> 419
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(419)
<223> n = A,T,C or G

<400> 127
gggcgtgtga ccccgctgcc tcccctttct ccctgctgct cgtgtccaga ggatgagccc   60
agccttcagg accatggacg tggagccccg caccaagggc atcctgctgg agccatttgt   120
ccaccaggtt gggggcact catgcgttct ccgatnnaat gagacaaccc tgtgcaaacc   180
cctggttccg agggagcatc agttctacga gaccctccca gctgagatgc gcagattcac   240
tcccagtac aaagggaagt gtggtncnct ganacccnnc ttcccgctcc tgtgcgccca   300
nagntggtgc ccgcctnacn tntgnccnct ctntntgagc acgcattncc ctgcagcang   360
caagnggtcg ggcagcanag actgagcana tngaatgacc gtggggcata taaggccta   419

<210> 128
<211> 193
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(193)
<223> n = A,T,C or G

<400> 128
gacctcacca cctccaacca cagncccctcn cacggagagg tcttntgaca gatgtcnatg   60
agaacaaccc acnactnttc gccggaagag gaacatgtgc nccagacctt cntaannact   120

33

```
tcaatatgat cggagcatnn atangagggc gnctatgatt ctacagagaa ctgaaaggaa        180
aacttttgat cag                                                           193

<210> 129
<211> 474
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(474)
<223> n = A,T,C or G

<400> 129
actgagcttg agatccgaaa agcgggtccg aacacaggat catagagacg acgggcgcag         60
agcgtatccc ctggcggcac cacggaggta acgcggaggg cggctagagc gtcactcgcc        120
caggcggctt cctcttcggc agtcctcctt cccaacatgg cgcagtcgat taacatcacg        180
gagctgaatc tgccacaact ggaaatgctc aagaaccagc tggaccagga agtggagttt        240
ttgtccacgt ccattgctca gctcaaggtg gtccagacca agtacgtgga agccaaggac        300
tgtctgaacg tgctgaacaa gagcaacgag ggaaaagaat tactggtccc actgacgagt        360
tctatgtacg tncccggtta agctacacga tgtggagcat gtgcttattg atgngggaac        420
cggntactac gtggagaaga cagctgagga cgccaaggac ttcttcaaaa ggaa             474

<210> 130
<211> 152
<212> DNA
<213> Mus musculus

<400> 130
ctttatcttt ggtggtcggc atctgatgaa caagcgagcc aagtttgaac ttcggaagcc         60
gctcgtgctc tggtcgctga ctcttgccgt cttcagataa ctgtttggtc acgttgctta        120
gtaaataaaa gtccacacta tgaaaaaaaa aa                                      152

<210> 131
<211> 769
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(769)
<223> n = A,T,C or G

<400> 131
gagcaagagc agctctacct gcggtctggt gtggtgacct ccgcaacctt tgagcagcca         60
gggcggcagg tcaagctgtg ggtgaagatg gtgaccccgc taatcaagaa cttcttctga        120
gaacaggaat ggccttgatg aagatgacgg gcatgactgg ggtcagatcc ttcaaccggg        180
cttcagcaat gactccggtc tgggtgtccc agcgagctcc tgtgtgggaca atggagctga       240
gggtctgggt gccctgggtg aggcagaacc cactgtttgg atgctgaccg tgaaaaaggg        300
aggcacggta gggagagagg cctggcctcc aacctcccca ctcttttcag agacaggcca        360
gtgactggga gccatgaagc gttcangcca ggtgccangg tctgagagtg ccaaacatgg        420
aggaatgtga accaaggact tcgangtgac tcttgcattg cccgtaatgg gctctgaagc        480
tgnatcttct taaaacttta atcttaagcc nttttcaatg ntcaantggg cannagaaaa        540
acttggancc gcaagnttca anaatnccca agcaaatggg tnccctttcc ttgaaacccc        600
cttccttggg ggnaaagggg cttaacttct tcttggggga cccttangg gggaaataaa        660
ggttanttttt ttttaggaat gcccccnttt ttttaaaccc ccttttttttt gggccccttt     720
aaacccccnn aaanntgggn ttggtggggc ccccttttaaa accccttaaa                 769

<210> 132
<211> 458
<212> DNA
<213> Mus musculus
```

                                        34

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<220>
<221> misc_feature
<222> (1)...(458)
<223> n = A,T,C or G

<400> 132
actgaggtga atgaggactc tggggnnact catggagaag atgcggttgt gatcctggag        60
aagacaccat ttcaggtaga acacgtggcc gcagctccta acggggagcc ctgagctcaa       120
gttgcagttc tccaatgata tctacagcac ctataacctg tttcctccaa ggcatctgag       180
tgatataaaa acaactgtgg tgtaccctgc cacagagaaa cacctgcaaa aatacatgcg       240
tgaggacctc cgcctgatcc gagagactgg agatgactac aggaccatca ccttacccta       300
cctggaatcc cagagcctta gcatccagtg ggtgtataac attcttgaca agaaggctga       360
agntgaccgg attgttcttg agaacccana cccttctgat ggctttgtctc tcntcccaga       420
ccncangngg aaccagcanc agcttgatga cctgtatt                               458

<210> 133
<211> 114
<212> DNA
<213> Mus musculus

<400> 133
gtactgaggc aagttacatt gcctcaacac agtacacccg acgggtacgt ggcgaaagca        60
gcggagggtc aaagaaggat actgtgcccc aagaggaggt cccaaaaaaa aaaa             114

<210> 134
<211> 204
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(204)
<223> n = A,T,C or G

<400> 134
gactgagctc cccctcccca gaggtaagca gccctccagc gccaagcagn ttagcatgtg        60
tgactctgga caagacaacc ttcccaggtt tctgaccgta nagcagcgaa naagacgacc       120
atgtctgagg gcaagatctg aggactaggg atggngctca gacctgccac acccaaggtc       180
tcttcagcac agcagaaagg aaga                                             204

<210> 135
<211> 377
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(377)
<223> n = A,T,C or G

<400> 135
ttccctggtg gactccagtc aagtgtcgac atttctgata tccattcttc ttatagtcta        60
tggtagtttc aggtctctta atatggactt tgaaaaccaa gataaggaga angacagcaa       120
cagttcttct ggctctttca atggcaacag caccaataac agcatccaga ccattgattc       180
cacccaagca ctgttcctcc cgattggagc gnctgtctct ctcctcgnca tgtncttctt       240
ctttgattca gttcaagtcg ttttcacaat atgtacagca gganntgnan aacnnnnttc       300
cncnnntggt gatatgcctn agtgangtgnn atcaccangg ctgctgctca ggctggnaac       360
aaactaagat ttcccgg                                                     377

<210> 136
<211> 344
<212> DNA
<213> Mus musculus
```

35

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<220>
<221> misc_feature
<222> (1)...(344)
<223> n = A,T,C or G

<400> 136
tccgaacaaa aagtggggtc tgtgngcccc ggaagnggac ataccgattg actgnggga      60
aaggaaacat gganctcaaa actgangggc gcccagacat gaaaacagac ctgttctcca     120
gctcgtgccc aggaggaatc atgctgaaan agacgggca gggctaccag cgctttctcc      180
tctacaatcg ggtcaccaca ccctccaaan aagtgtgtgg aggaattcca gtctctgacc     240
tcttgcttgg acttcaaagc cttcttagtg actcccagga ntcaagaggc ctgcccgctg     300
tccagcaagt gaccagtgac ttccccgggt cctaaaaaaa aaaa                      344


<210> 137
<211> 121
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(121)
<223> n = A,T,C or G

<400> 137
aacataagca ctcacannat gaanccctgc caaaaaatgg aaggaaacct agaaaaggag      60
natganccaa agcctnagna nnagccaaca gccngagnaa aagcctctag gaggggcagg     120
a                                                                    121


<210> 138
<211> 320
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(320)
<223> n = A,T,C or G

<400> 138
ccctgacatc ccttggacgc agacccttct agccgattac atcaatgggt tcccgggaga      60
caccttcttc ttgctctaag acccttgaaa ccttggacct ggagacttcc gacagctcta     120
gccctgatgc tgacagtcct ctggaagagc aatggctgaa atcctcccca gccctgaagg     180
aggacagtgt ggatgtggta ctggaagact gcaaagagcc tctgtccccc tcctcgcctn     240
cgacaggcag agagatgatc aggnacaaac tcnaagcgaa ccgncngagc attgaanaca     300
tntgtctctg ctgaggaact                                                320


<210> 139
<211> 418
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(418)
<223> n = A,T,C or G

<400> 139
tgccctgcat cacctggtgg nggcagtgca aagcccggtc agtggccctg gcaggtcagc      60
atcacctaca atggctacca tgtttgtggc gggtcgctcg tgtcaaataa atggtggtg      120
tctgctgctc actgcttncc cagagaacac agcagggaag cgtatgaggt gaagntggng     180
ncccaccagc tanactccta cagcaatgac actgtggtcc acacagtgnc tnagatcatc     240
acccactcaa gctaccgaga ngagggctcc caggggaca tcncgctcat ncgcctcanc      300
agtcctgtca ccttntcccg ntacatgang acaccatctg cctncctgaa gncaatgcct     360
```

```
gctttttcca acggncnttc actgtnctgn cacggaatgg gntcatgtgg ctccttga          418


<210> 140
<211> 179
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(179)
<223> n = A,T,C or G

<400> 140
agaaggtggc cacttnnac tatatgcatt tgaagatgtg ctccctccac ngaccaactc          60
agccacctgc cacttgaggg gtccacgggg gcaatgnngg gaggaagcan tggagggget         120
cccctaaac gtgggagtcc aggctctgaa caataaatgg cctctcatgc tggcatgaa          179


<210> 141
<211> 357
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(357)
<223> n = A,T,C or G

<400> 141
gaactgagct ggattaanca gctctccagt atgaacttca tagatggcag catcataatg          60
tgacgtcacg gcttgaacat gactgacagc atcttcagct gctgaggtcc ctcatcagct         120
catggtgact ccagtttgaa ctctcaagct gcctgcatcc agagcctcaa acccactgtc         180
ctggtctcag gagcccatct acaagctcag aatgagggac cacatcctga ctctgcatca         240
ctcctgccaa tgacattgac ccacctaggg ccagaagtaa cataaaggaa taggcagtga         300
atgaanaata gagagctagt gtggnggtac acacctatga ttccagcact tgggagg           357


<210> 142
<211> 224
<212> DNA
<213> Mus musculus

<400> 142
gactgagaga tgtggtatgg tgtgttcctg tgggcactga tgtcctctgt gttctttcat          60
gtccctgccg gactgctggc cctcttcacc ctcagacacc acaaatatgg taggttcatg         120
tctgtaagca tcctgttgat gggcatcgtg ggaccaatta ctgctggaat cttgacaagt         180
atgttagaca ttaaaatacc ggtcaaaaac gtgaaaaaaa aaaa                         224


<210> 143
<211> 414
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(414)
<223> n = A,T,C or G

<400> 143
gactgagccg ccctgcaggc tctgaagcgc aagaagaggt atgagaagca gctggcacaa          60
attgatggca ccctgtcaac catcgagttc cagcgggagg ccctagagaa cgccaacacc         120
aacacggagg tgctcaagaa catgggctat gccgccaagg ccatgaaggc tgcccacgac         180
aacatggaca ttgataaggt ggatgagtta atcagcggaca ttgctgacca gcaagaactt        240
gcagaggaga tttccacacg tatctccaaa cctgtgggct ttggagaaga gttcgacgag         300
gatgagctca tggcagagtn ttgagncttg ancaanaaga gttncgcaag aatttgttgg         360
```

```
agatcagtgg gcccgaaaca gtccctctac caaatgtccc ctccgtaccc tacc          414


<210> 144
<211> 248
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(248)
<223> n = A,T,C or G

<400> 144
ggactcccct aggattccga gcacctttcg ctgtggactc cagccccacc cgaggntgga          60
tgtggagctg aggaaactga cccaccgctt gctttcctcg gagccccttt ctctctctaat        120
tcatgagcca cgcaggatgc tggtccgcct gcgctttcag aacgcctgct catagctgcg        180
tacaaaggcc aancannttn ntgtggnnnn gngnnatcaa caagggtgcc aaggcagccc        240
gttaccaa                                                                   248


<210> 145
<211> 492
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(492)
<223> n = A,T,C or G

<400> 145
gacttcagga accatgccga agccacacag tgaagcaggg actgccttca ttcagaccca          60
gcagctccat gcagccatgg ctgacacctt cctggaacac atgtgccgcc tggacattga        120
ctctgcccct atcacggccc gcaacactgg catcatttgt accattgggc ctgcttcccg        180
atctgtggag atgctgaagg agatgattaa gtctggaatg aatgtggctc ggctgaattt        240
ctctcatgga acccatgagt accatgcaag gaccatcaag aatgtccgtg aagccacaga        300
aagctttgca tctgatccca ttctctaccg tcctgttgcg gtggctctgg atacaaaggg        360
acctganatc cggactggac tcatcaaggg cacgggcacc gctgaggtgg agctgaanaa        420
gggagccact ctgaaaatca ccctggacaa ncgcttacat ggagaaagtg tgacgaagac        480
atccctgggg tt                                                              492


<210> 146
<211> 465
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(465)
<223> n = A,T,C or G

<400> 146
actgaggaat ctcatgcact agggnaagga acctgaaaac ccagcagaca tgattgaaga          60
aggagagtgt atcctatctg tgaacatctt atatcctgtt atatttaata agcacaaaga        120
acacaaacca taccagacca tgttggtact gggcagtcag aagctcacag aactgagaga        180
ttcaatttgc tgtgtcagtg acctccagat cggtggagaa ttcagcaacg cgccagacca        240
agcccctgag cacatcagca aagacctcta caagtcggct tttttctatt ttgaaggaac        300
attttacaat gacagaagat acccagaatg cagagacttg agcagaacta ttatagagtg        360
gtcagagtcc catgatcgag gatatggaaa atttcagact gctagaatgg aagatttcac        420
atttaatgac ttgcatatta aacttggctt tccttactta tactg                        465


<210> 147
<211> 111
<212> DNA
```

38

<210> Mus musculus

<220>
<221> misc_feature
<222> (1)...(111)
<223> n = A,T,C or G

<400> 147
gactgaggaa aatcttctgg ntgtnatttt atataaccaa acatgtcatg gnccttcaca   60
gcatacnaat agttttgacg ttttaaatan aagtatccag cacagacaaa a   111

<210> 148
<211> 425
<212> DNA
<213> Mus musculus

<400> 148
ggggtctttc aagagcagcc ggtatcagtt ccgcaatctg gcagaatgcc tacagaaaat   60
tcgagacatg attgccgagg ccagccaggt acccaaagag ccatccaagg aagatgctcg   120
gcttcagaga ctcaggattg aaaagatgaa tcgggaaagg ctacgacaga aaagactaaa   180
ctctgcccta agaccagca ggaggatgac tatggactga agtcggccct ccctgctggc   240
atagacctga gtgccagtgc agctcagcag agcactgaca cacacaggag actttctcg   300
attaaccgcc ctgcccgagc agcgttcctt tggagggagg ctgcagatca tccagggctg   360
ccccttccgt tatccacctc atgaatcact ggctgcaata aacatcgaag cacaggaaaa   420
aaaaa   425

<210> 149
<211> 243
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(243)
<223> n = A,T,C or G

<400> 149
gatgaccgag aagcgcttga aaaggagaaa gcaatacatt gaacgcntga gaaacctgac   60
tgaggaagaa aggcgggcag aacttcgggc aaatggcaaa gtcattacca acaaagctgt   120
taaaggcaaa tacaagtttc tacagaagta ttatccaccga ggtgccttct tcatgtgatga   180
ggatgaagaa gtctacanga gagactttag tgcacctact cttggaggaat ttgacaggat   240
ggc   243

<210> 150
<211> 128
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(128)
<223> n = A,T,C or G

<400> 150
cctgagcggg gcatctggng gccgctgtct atgctctntt ttccnctgga nagaatattt   60
aaggaangct ccttcattaa gtattaagna tatggaaata aagaattact cagtcttaaa   120
aaaaaaaa   128

<210> 151
<211> 528
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(528)
<223> n = A,T,C or G

<400> 151
cactgaggag tctagagcag gaggatcttg agttnaagng naaggntggt atangtagtg   60
tgtggagaac agctggnggc aacgagatgg ctgcttctgt cccatgggcc tgctgtgctg   120
ngcttgccgc tgccgccgcc gntgtataca cgcagaaaca cagtccacag gaggcacccc   180
acgtgcagta tgagcgtctg ggcgcagatg tgacgctgcc gtgtgggaca gcgagctggg   240
acgcagctgt gacatggagg gtaaacggga cagatctggc ccctgacctg ctcaacggct   300
ctcagctgat actgcgaanc ttaaaactgg gccacagtgg cctatacgcc tgtttttcacc   360
gngnanttct tnggacttgg ggcncncaan gcctttttaa atntggggtt tgccgcccgc   420
gggagcctgg tgcttcagct tgccgcttca acaacttacc ccaagggctt ctactgcagc   480
ttggaacctg cccaacccc acctacatnc ccaatacctt caaatgtg   528

<210> 152
<211> 343
<212> DNA
<213> Mus musculus

<400> 152
tgagagatta ctggcttcga gtcccaagcc tctggcatta gcttcctgag agctggactt   60
acagagtgct ttccttatgg taaaaggttc tatcccacag cccacattgt caggaaatggc   120
tccctctaaa gtgaaagtgg ataaactcaa gagaaaggat tggatcatac acggtttttt   180
ttctcctttg agattataat gaacatggtc acaccacaag taaagtccga agtaggacag   240
aaaacgctct gaaggcttgt ttgatcaccc gttatcgtta aaaatagctg acccctaaca   300
atatgtaccc aaatataaaa tgtaaataaa aaataccaac aca   343

<210> 153
<211> 481
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(481)
<223> n = A,T,C or G

<400> 153
attcatgggc attgcagtct aagaaggtcc tactgacccc cctcatacat ccagctcgcc   60
ctttcgagt ttcaaaccat gaccgaagta gccggcgtgg ggtgatggcc agcagcctgc   120
aggaacttat cagcaagact ctggatgtct tagtcatcac aactggcctg gttacgctgg   180
tgctggagga ggacggnacc gtgngngaca cagaggagtt ctttcagacc ttaagggaca   240
acacgcattt catgatcttg gaaaagggac agaaatggac accgggtagt aagtatgtcc   300
cagnctgcaa gcaaccaaag aaatcgggaa tagccagagt caccttcgac ctatacaggc   360
tgaaccccaa ggacttcctc ggctgtctca atgtcaaagc cacgatgtac gagatgtact   420
cggtgtccta cgacatccga tgcacaagct taaggccgng ttaaggaatc tgcaactaaa   480
g   481

<210> 154
<211> 101
<212> DNA
<213> Mus musculus

<400> 154
actgagggaa gtagcttcta acaatgaact atggcaacaa ttctgcttca aaacttacta   60
atacaattgg atgaacagtt ggggcgtgtt tccaaagaaa a   101

<210> 155
<211> 438
<212> DNA
<213> Mus musculus

40

```
<220>
<221> misc_feature
<222> (1)...(438)
<223> n = A,T,C or G

<400> 155
actgcgaaat tatcactttc tggccatgtt ggatttgaca gtctgcccga ccagctggtc      60
aacaaatcca cttctcaagg attctgtttc aacatcctgt gcgtgggtga gacaggtatt     120
ggcaaatcca cattgatgga cactttattc aacaccaaat ttgaaagtga cccagctact     180
cacaacgagc caggcgtccg gttaaaagcc agaagctatg aactccagga aagcaacgta     240
cggctgaagc taacaatcgt tgacacagtg ggatttggag accagattaa taaagatgac     300
agctataagc ctataatgna atanatngac ncccantnng atgcctantg caagaagaat     360
tgaaaattaa acgttctctc ttcaactatc atgacacaag gattcncgcc tgcctttact     420
ttatcgcccc cacgggac                                                   438

<210> 156
<211> 451
<212> DNA
<213> Mus musculus

<400> 156
actgagtatg acagtcatgt ccctctccgg ggcctcaagg acgactttca cagtgacaca      60
gtactctcca tcttaaatga gcagcgcatt cggggcatct tatgtgatgt caccatcatc     120
gtggaagaca ccaagtttaa agcccacagc aatgtcctgg ccgctcaag tctttatttc      180
aaaaacatct tttggagcca tacgatctgc atttccagtc acgtcttgga gctggatgat     240
ctgaaagccg aagtgtttac agaaatactt aattatatct acagctctac cgttgtggtc     300
aaaagacagg aaaccgtcac tgatcttgca gctgcaggga aaaagctggg aatatcattc     360
ttagaagacc ttagtgaccg caacttctca aattccccag gtccttacgt agtctgcatt     420
actgaaaagg gagtggttaa agaagaaaaa a                                    451

<210> 157
<211> 475
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(475)
<223> n = A,T,C or G

<400> 157
aactgaggct tttgtggcta caggaaccaa tctgtctctc cagttttttc cggccagctg      60
gcagggagaa cagcgacaaa cacctagccg gaatatgtc gacttagaga gagaagcagg     120
caaggtatac ttgaaggctc ccatgattct gaatggagtg tgtgttatat ggaagggctt     180
ggattgatct ccacagattg gatgtgatgg gttgcctgga gtttgatgag gagcgagccc     240
agaatctgat gtcattgatg atagccaanc tggggaaatc atggtgaact tcacaggctg     300
gttgaacaan ngtnaagtga tcagccctag atttaatgtg caactcaaag acccagaaaa     360
tagcgganca atntgctctc acctgncact ggcttccagn gnactgacnn cttcagctgg     420
agncatggac catgaagaac atggagaana cacacncgaa gggaaaattc ttgtt          475

<210> 158
<211> 438
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(438)
<223> n = A,T,C or G

<400> 158
agactgagga ggaatctttg agtatgcgga tggtcccaac gcccaggtca tgaacgctga      60
agagcacgcc tttcgatttt ctgccaacat catcaacaga aacaggactc tgctgcccaa     120
```

41

```
cacgaccctg acttacgaca ttcagaggat tcacttccat gacagttttg aggccaccaa      180
gaagggtaag aacactgaaa acatgcgtgc aacacatcat attaaccgta gtcaccttgc      240
tacgggtctt attgcatctt tcgttggcat cctactcgag tagcaatagg tagcatacat      300
ataaagcaga gactgtatta gccccagagc acaccatctg cctgccgtaa aaagacttta      360
taagcacagc gtgctgctca gtgcccgcaa catcttgacc ccagaaccta cagaaaaanc      420
cttgaagttg acaccggg                                                    438

<210> 159
<211> 437
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(437)
<223> n = A,T,C or G

<400> 159
tgaggatacc agcatgccag ttcaacacca aacactaaat acagatcagt agtggtggcc       60
cgatccagga tccagcagaa acagcanggc tctgnggaat tggtatgagt cggctggaat      120
cagtcagagc cagcagaant accacaagaa gttcttggta catttctagt cttcgaagtg      180
aagaccgacg aagaagatga gcaaagaccg gcaaatcgtt gcatgaccta gcaatgcaag      240
agtgtcctct cactgtctgt gggtctattc atactctttc taagcaccat gcgacctctc      300
aagggtctgt ttccagcaaa acatcacatg ccctctcacg agacagcttn caggaaaaca      360
tcatgtggca caactgantt gttaaagaaa ccagaaattt ncacttcaca tntccctttc      420
tgcttcaaaa aaaccca                                                     437

<210> 160
<211> 224
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(224)
<223> n = A,T,C or G

<400> 160
accagtgaca attactacta caccccacagc atttggcaca tcctactggc tggtagtgca       60
gcatttcttc tgccaccacg agaggaaaaa gctgggtcct gggcctgttt gcagaagttc      120
ccttgtcact accagatctg caggaatgat cgggatgagt tgtacacagt gacctgataa      180
ggctggntca tggacacctg aaactctaat gacctcttca gcta                       224

<210> 161
<211> 176
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(176)
<223> n = A,T,C or G

<400> 161
actgaggaaa atatatgcaa tgatctacag caaatttagt ggctgtaagt cagcaaggna       60
ggnaatnntg aatatttataa acatagnata acttaataac ngnnctttnt catgtaagat      120
cttatgtatc ctagtctaac cttaaactat gtagctactg gacccttgag ccttaa          176

<210> 162
<211> 357
<212> DNA
<213> Mus musculus
```

```
<220>
<221> misc_feature
<222> (1)...(357)
<223> n = A,T,C or G

<400> 162
gggctctttc tacatagctc tggctgtcct caangtgngt agaccaggct gcttcactga      60
gngctaggna ttaaaggaag gcaccaccac cccggntctg ggccaatgan ancggcacna     120
aaagacccgn tgntgctcgt ctacccatta ctgattcatc tccactccag aagnctanag     180
anacagaaga cnatcngtnt cactncaatg gncanataac tgagtactga ctggctcagg     240
ngatcctaaa gncaactcac caatgtagca naagcccnag tgtnaccgac tgaaggagaa     300
aacacaganc tacncattgc attnacctcc cctattattc attacatgcc accccac        357


<210> 163
<211> 529
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(529)
<223> n = A,T,C or G

<400> 163
gactgaggaa taatgtctca gccaatcagg atgaagaact gggtcatgag acattcctga      60
tgcaaatcga ccaggagaca aagaagtgta ctttctattc cagcactggg ggctactgga     120
ccttggtcac ccatgggggc attcaggcca cagccacaca agtctctgcc aacaccatgt     180
ttgaaataga atggcatggc cggcgggtgg cacttaaagc cagcaacggg cgttttgtgt     240
gcatgaagaa aaacgggcag ctggccgcca tcagcgactt tgtgggcgag gacgagctat     300
ttaccctcaa gctcatcaat cgacccctcc tggtgctgcg tggcctggat ggctttgtgt     360
gccaccgccg gggctccaac cagctggaca ccaaccgttc cacttacgac gtcttccact     420
tgagcttcag ggatggcgcc tatcagatta gaggccgngg aggtgggttc tggtacacag     480
gcagccatgg aagcgtgtgc agcgacggtg acttggcgga agatttcct              529


<210> 164
<211> 552
<212> DNA
<213> Mus musculus

<400> 164
atgagcggga ccgagtgcaa aagaaaacat tcaccaagtg ggtcaacaaa cacttgatga      60
aggtccgcaa gcacatcaat gatctctatg aagaccttcg ggatggacac aacctgatct     120
ccctgttaga ggtcctctca ggcatcaaac tgcccagaga gaagggcagg atgcgtttcc     180
acaggctgca gaatgtgcag atcgccctgg acttcctaaa gcagcggcag gtgaagctag     240
tgaataccg caatgatgac atcacagatg acatcccaa gctaacgctg ggcctgatct     300
ggaccattat cttgcacttc cagatctctg acatctacat tagtggggaa tcaggggggac     360
ccaccaggat aaaccaagtg agtgtttatc cactcacagc ctttcgtgac cctacatttc     420
catgcacagg tcagaagctg caccaatgag aagtcttcag gcgatgtaga aatgactgtg     480
gattctaata cacaccgaaa ttctgactga gaatttaaat tgcagaataa agttttaaaa     540
cctaaaaaaa at                                                        552


<210> 165
<211> 114
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(114)
<223> n = A,T,C or G

<400> 165
catggcatcc aaggatgaat nggccgggaa tggactttcc cccctttttt cccccctctt      60
```

```
ttctaaagcg ngtctgccat taaaaatttg aaccttgaga gaaaaaaaca caaa          114

<210> 166
<211> 239
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(239)
<223> n = A,T,C or G

<400> 166
tccatatatg aaatgagnaa cactgaatgn ccagtggagg ttgcttgcca gacaggagct    60
gagcccacct gcagccaagc ctccagcact aaggnccca ncagtggaag nactcanacg    120
gatganagcc atnaaggcnt anctgantcc agnanggaca aatnccagnc tnctgcccaa    180
catgccaaag ctgnngatan ccctnggcca ccaccaagtc ccctactgag attaccgtc    239

<210> 167
<211> 461
<212> DNA
<213> Mus musculus

<400> 167
gataaaactc catccgcact cattctcaca ccgacaagag aactggccat tcagatagag    60
aggcaggcca aggaactgat gagtggtctg cctcgcatga agacagtgct tctcgtaggg    120
ggcttacctc tgccccaca gctctatcgc ttacggcagc atgttaaggt tatcatagca    180
accctggac gacttctgga tataattaaa gagagctccg tatcactcag tggcataaaa    240
attgtcgtag tagacgaagc tgacaccatg ttgaagatgg gctttcagca gcaagtgctt    300
gacgttttgg aacacactcc tggtgactgt cagaccatct tggtttctgc caccattcca    360
gatagcatag aacagctcac agaccagctt ctgcataatc ctgtgaggat catcactggg    420
gacaagaacc tgcctgcgcc agtgtgcggg aaatcattct a                      461

<210> 168
<211> 457
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(457)
<223> n = A,T,C or G

<400> 168
ttaggcccgg aggcggaacc ggaagacccg ggtactggtg ccacgtccgt tgctgtgctg    60
cgaattccct gagtgggacc ctggagggcg cgatggcaga ttggactcga gctcagagct    120
ctggtgctgt ggaggacatt ctggacagag agaacaagcg gatggctgac agcctggcct    180
ccaaggtgac caggcttaaa tcgctggctt tggacatcga cagggacaca gaggaccaga    240
accgttactt agacggcatg gactcagatt tcacaagtgt gactggccta ctcacgggga    300
gtgtgaagcg cttctccacg atggcacggt ctgggcgaga caaccggaag cttctgtgtg    360
gtatgcgtgt ggtcttaatc gtggccttct tcatcctctc ctacctcttg ncgaggacaa    420
ggacgtgagc cagnggggagc caagggcagc caggcta                         457

<210> 169
<211> 313
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(313)
<223> n = A,T,C or G
```

<400> 169

```
ggaaagaaga aatatgaata cggctccatc aagacccagc cccacacgaa gctcgcgtgt      60
cattgggagc cttcagagca ggaggagggc cccagggtcg agctggtgtg tacctgccat     120
gttgctctgc agcaggcagc agagatttga ctcttcgttg caaattgctg ccggtccaga     180
tgctaagcca ggtttgcggg aagagctgct tgagagctgc tgctgtgcct gtgctgcana     240
ccccgcgtgc tcgcatgttt gggttacttg tttgaaggga aataaaaagg gcaaaacact     300
ccaaaaaaaa aaa                                                         313
```

<210> 170
<211> 130
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(130)
<223> n = A,T,C or G

<400> 170

```
gtgtccacca cccacagccc agcggcctgc agcgatcntg acctnatctg ccccactgan      60
ccacngaata angnanccnn ccctactctc ttgaatacca tcaataaagt tcgctgcacc     120
caaagaaaaa                                                            130
```

<210> 171
<211> 215
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(215)
<223> n = A,T,C or G

<400> 171

```
gcctccaggt atgaaatcca aacagatgtg catagacngg atccctgcga ctgtcagagg      60
cagaagttca catggataac cctgtctcag gaggaaaagg agacgtcaag gacagangga     120
gtggaaagcg aagcttcact tcctttctag agaatcgtct ncaancacca atatatatgt     180
aaatgtgtca ntnatngaac tttcctgaca aata                                 215
```

<210> 172
<211> 121
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(121)
<223> n = A,T,C or G

<400> 172

```
tgccgttctt ttgttcttct ccgtgaaaaa ctgtgtccgn agtgacaaag agacagtgtc      60
cgtttgttca tntgtgacat cagagnagcg tactgtagca catcncgaga gacagatgag     120
a                                                                     121
```

<210> 173
<211> 207
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(207)
<223> n = A,T,C or G

<400> 173

```
ggaactctca aaggtcngac acgcgaagna tggcatgctt ncatataaan gncatctnna      60
nnnaagttca ccctntcggt nnntgcaggg tgactcaggg ggcctggctg ctgcttgtct     120
ggctttgttg aagagggatt ggggaagcag ggttgtggnt cctattttct cccacccntn     180
caagcccncg gcaaggtctt tgtcgaa                                         207
```

<210> 174
<211> 391
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(391)
<223> n = A,T,C or G

<400> 174

```
gactgagtcc agcccaaaga gtaaacnaga naagcttgga gaagccctc gccctgggng      60
ggtgctcttt gactttgnct nnganccgat gacccaccan aacccactgc tggagacaaa     120
cagccgctcc ccggggctga agggtactgt tggaggtcat cgaacaagca agattatgag     180
gtttgttgat aagatcacca aatcaaaata tttccaaaaa gcaacagaga cagaattcat     240
taaaaagaag atcgaagaag tctctaatac accagctgcc tgaggaaaag ctttggagga     300
gtcaaaaggc aaagggaagc cttctagttg tacagctttg ctctgaatgt gctcatttgn     360
ttgtccgtga gatgccagga cttggaaggt g                                    391
```

<210> 175
<211> 260
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(260)
<223> n = A,T,C or G

<400> 175

```
ctcctgccaa tgtggctnac tgcatgcatt angngctttg gatgacctga nctctggncn      60
acctgnancc acatggtagn naggctgctg acttggagag atggtgacaa gattgagtct     120
gtctggatga tagcatcctg tgccacctac tgatgactgg ttggtgtggg aagccacatg     180
tgccgttgca gagtggtact gactactgct ggccaccacg cataagattg gacaaacaac     240
caatgtgtac atatgcagta                                                 260
```

<210> 176
<211> 246
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(246)
<223> n = A,T,C or G

<400> 176

```
gtggggagcg tggattcttc tacacaccca tgtcccgccg cgaagtggag gacccacaag      60
ttctgaagat gaactggatg tgcttttaca tggaacccca gaccaaaagc gaaaactcat     120
ccgggaatgt cttactggag aaagtgagtc atcaagtgaa gatgaatttg aaaaagaaat     180
ggnggctgaa ctaaactcca ccatgaagac aatggaggac cagttatcct cactgggaac     240
agggca                                                               246
```

<210> 177
<211> 535
<212> DNA
<213> Mus musculus
```

```
<220>
<221> misc_feature
<222> (1)...(535)
<223> n = A,T,C or G

<400> 177
cacctccaga aattgaggga gaantanngc gagacttcat ggntgcgctg gaggcagagc      60
cctatgatga catcgtggga gaaactgtgg agaaaactga gtttattcct ctcctggatg     120
gagatgacga aaaccgggaa ctcagagncc aaaaagaaac cctgcttaga cactatncag     180
gnngaangtt ccnatcttct agaccaacgc tcctanccat gggtgatcan ggaatggagg     240
ggaataacac tgcngggtct ccaactgact tccttgaana gagantggac tatccggatt     300
atcagancag ncagaactgg ccagaagatg caagcttttg tttccagcct cagcaagtgt     360
tagatactga ccaggctgag ccctttaacg agcaccgtga tgatggtttg gcagatctgc     420
tctttgnctc cagtggaccc acgaaccgct tctgcatttt acagangcga gacaattctt     480
cngaaagacn gntncngnnn aattctacat aagaaaatct gcttttgggg gctgg          535

<210> 178
<211> 597
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(597)
<223> n = A,T,C or G

<400> 178
gacatcaatg cttacaatgg tgaaacaccc acggaaaagt tgccatttcc catcattgat      60
gataagggca gggaccttgc catccttttg ggcatgttgg atccagtcga gaaggacgat     120
aacaacatgc ctgtgacggc ccgtgtggtg ttcattttg gccctgacaa gaaactgaag      180
ctgtctatcc tctaccctgc caccacgggc aggaactttg atgagattct cagagtggtt     240
gactctctcc agctgacagg cacaaagccg gttgccaccc cagttgactg gaagaaggga     300
gagagcgtga tggtagttcc caccctctcc gaagaggaag ccaaacaatg tttccctaaa     360
ggagtcttca ccaaagagct cccgtctggc aaaaaatacc tccgttatac accccagcct     420
taagtctttg cggaaattgg ggctgcatct gcacatccag tactgggggcc tgaggatgtc     480
agctggcagc ccgtgggtcc ttgcancang tccgtagaaa gatcgtggca tgatcacaag     540
ccggcctgta gatcgctcgc tatactactg ggcattaaat ggaaatggcc ccaaaaa        597

<210> 179
<211> 203
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(203)
<223> n = A,T,C or G

<400> 179
ccggccaccg gcggctgtag aagaagcctc accgcctacc gtaccggcac cgngnttgct      60
gngcgagatn cggccgctac cagaagtcga ccgagctgct gatccgcaag ctgccgttcc     120
ancgcctggt gcgcgagatc gcgcaggact tnangaccga cctgccgctt ccagagctcg     180
gngtgtnatg gctctgcagg aag                                            203

<210> 180
<211> 125
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(125)
<223> n = A,T,C or G
```

<400> 180

aaggagagac aagggccttn ctgaggcagn acaaggaccc annanctacc cagtaatgca   60
nnaggggcggn cccnnacgac tganctctga tcctaacctg caaagtgaag tttcaatttc   120
cactt   125

<210> 181
<211> 137
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(137)
<223> n = A,T,C or G

<400> 181

cagtggtctt agttttgagg agcatctata caaaatgcat atacaantgg ttttagcata   60
aacatnggag aaaagcgtct acactganac ataagagaag ttgttactga acatgtnata   120
aataaggtgc aagaaga   137

<210> 182
<211> 360
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(360)
<223> n = A,T,C or G

<400> 182

gtgtatgatg aaaaagatac agggaggggtt cgttttgtag atcgtcagaa agaggtgaat   60
gagaatttgc cattgatttg atatgcacaac agcctgtgaa tgaggtggag caccgcatca   120
taacctgcga tggaggcggt ggtgccctgg gccacccccaa ggtgtgtncnta aacttggaca   180
aagaaacgaa aacggggaca tgtggctact gcggnctgca tttcaancag nagcatcact   240
agtgtgtgggnt gtgtcctggt cctctgactc ctatggaaca tctccacgct gggtgttctg   300
tgtgaggcca ctgctctgtg aatggtgtcc cttgttttga ataaaggatg ctcccaccat   360

<210> 183
<211> 348
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(348)
<223> n = A,T,C or G

<400> 183

tccccaccttt gcatcatgga anaaaatggg tggacccgaa aaatccacca tgggctactn   60
agggtncagc cactgcggtn tcacaaccag atgcactagg ggttcancag cnatcacttn   120
tgggagcatc tcctaccatt tatacccagc agactgcatt ggcggnggca ggccttaccc   180
acaaacgcca ncnnactntc aggnaacaca aactgcggna ctgcagcaac aagctgcagc   240
tgtnttacag cancaatatt cacaacctca gcaggccttg tatagtgtgc agcagcagtt   300
gcaacaacct cagcagacca ttttaacaca gaatacgagg ctagggaa   348

<210> 184
<211> 310
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature

48

<400> 184
```
taagttccct ccagggcntc tgcactagna ctgcagtgtg ctccacatac atcactgtag        60
gcctgacctc ctaacttgag ataaccggaa ccaagttcct gggatgcagt tgcatttcca       120
acgtgatcca ctggggcatc aagagcanag gatgactgga gagtgagggt cgctgtattc       180
ccagctcctg gctgagggcc tctccagccc caagagttgt cctggaagta gattngctgt       240
ctccatggac atgtgancaa tgggaaaaag aagcatacat tcagnantac tgacaggaag       300
aggacaagca                                                              310
```

<400> 185
```
actgagggag atctctggcn acctgnnagt cacatttcat ggttgtgctc atcccttccg        60
ggtccaggta cagagacgat gctgccacag tncgcgagca caagtaattn aaagggccag       120
ggagtcggca acaagaactg gnaggagtna tcatcttaag ttagaagaag cagatcaaac       180
aagtcttatg ataaaaactt tattgtctta aatatcaaag gttttacaca tcacgttttc       240
ttcagaaagt tcctattaaa gaagaaaaat a                                      271
```

<400> 186
```
acaggccata attacttntt gggaactct caataggcg nacaggaatc atggctggtt          60
ccatacaaga agcccgtgcc caancatgtg atgaaggaa agcggggggt ggtgtggccc        120
ttaccantgg caccatccga gnggccatgg nggaaaanaa tggagagcgt gtcctcatgg       180
aggggaagct cactcacaan atcaacaccg anagctccct ctggaccttg accccggcag       240
gtgtgttttg gtgaatctga ncaaggttgg cgagtactgg tggagtgccc atcctggagg       300
gggaaaagcc catcgacntc gacaanatca acaagggagc cctccatggc tactgnggat       360
gaagaggaac angcattcct ggacaaaac                                         389
```

<400> 187
```
aaagagagca cctgtgagga ctgngtnaag agcnaaccca aggggggattc tgaccatttc        60
ttcccgcttc cagccatgga ggaggggca nccattcttg tcaccacaaa aacggtgac        120
tacggcaagt caagtgtgcc aactgctttg caaagtgtca tggggatgga gaagccaact       180
cacactagat aatgagcttc ctaactggtg tgaagctgct ttgagaacct tctgtcagga       240
gagctggtgt tttagatgtc gttaggatga ccgtttacca accaagaata cagttttttg       300
```

```
tcctttaaaa aaaaaaa                                                      317

<210> 188
<211> 213
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(213)
<223> n = A,T,C or G

<400> 188
actgaggctc aaaggaatga ctcaattcca agtctttcca caaacctctc agcaaacact      60
ccaacttant gaggcgcagc actggctcac atntagcatt ccancattct ggagatggag     120
agaagagagt ccaaaggttt gaccccagnc tcggcctcag gcccgagtac aaaggacagc     180
cttaccanac caataaagct cacacgatga aaa                                  213

<210> 189
<211> 621
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(621)
<223> n = A,T,C or G

<400> 189
tacttattgt ggaactatna caggacagac atnattgaan nagttattac cntgtagagn      60
gtcncnctgn tntncgctgc gaccttgatc ttntttcact tgtacaagaa caaaggcagc     120
tacgtnacct atgancctgc agaaggggag cccancgcca tcctncanat ggagactgac     180
tcagccaagg gcagagagaa ggaagagtac ttcatctaat gcttcccagg ctggaggggc     240
caattcttgg ctccaacact aagccgctgc ctctgtagtt agggaacgtt tgctctaaag     300
ccagggagtg gcgttgggtg atacaggcac atccactcac ctcccaggac acagccccca     360
ataccggcat cactgactcc agggtccaga gacatggaga aagctgttca tgatgctggg     420
ccttgataag gacagtgctc gaaaccgacc accaaagagg ggccatgcct gagttggaag     480
tgaggtcaca tgctggtcca ctttgncccc tccctattna cgaccaatag ccccagtcag     540
ngctatncag ncttttctgg aggcaggaca ccncagggag ggggtcggac ccagggnagg     600
gganagggag tctgaaaaag g                                               621

<210> 190
<211> 431
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(431)
<223> n = A,T,C or G

<400> 190
ctgagcatcc agcgagcagc cttggtggtt ctggaaaatt actacaaagg acttcaccat      60
ctataacccg aacctcctaa cagcatccaa attccgagca gccaagcaca tggctggcct     120
gaaagtctac aatgtagatg ggcctantan taacgccact ggtcagtccc ggccatgat      180
tgctgcagca gctcggcgca gagactccag ccacaacgag ntgnattatg aagaggccga     240
acacgaacgc agggtgaaga agcgganagc aagactggta gtggctgngg aggaagcctt     300
catccatatc cancgtctcc aggctgagga gcaacanaag tctcctggag aggtgatgga     360
ccccagagag gcagcccagg ccatcttccc ttcatgggcn ggggcacttg agaantacct     420
tggggcaccc a                                                          431

<210> 191
<211> 279
```

50

<210> 191
<211> 279
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(279)
<223> n = A,T,C or G

<400> 191
```
gactgaggtg gttattggtg gcagaataaa tacttaatca atggagtgaa tgccaacaac        60
accanaagtc caagatctct tttgttctgt gggcctgaat gttaacaacc ctcactttct       120
catcatgcag ggcagaatta ccgaaagtat taaatatgaa accaccagag atattatcca       180
tgattgaaga agctgctgga accaggatgt atgagtacaa aaaaatagcc gcccagaaaa       240
ctatagaaaa aaaggaggct aagctgaaag aaataaaaa                              279
```

<210> 192
<211> 774
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(774)
<223> n = A,T,C or G

<400> 192
```
actgaatgac tgcctggagg agtcacagtc ggatatcagc ctcgagctcc ctctgagcca        60
ggagacattt tcaggcttat ggaaatact tcctccagaa gatatcctgc catcacctca       120
ctgcatggac gatctgttgc tgccccagga tgttgaggag tttttttgaag gcccaagtga     180
agccctccga gtgtcaggag ctcctgcagc acaggaccct gtcaccgaga ccctgggcc       240
agtggcccct gcccagcca ctccatggcc cctgtcatct tttgtccctt ctcaaaaaac       300
ttaccagggc aactatggct tccacctggg cttcctgcag tctgggacag ccaagtctgt       360
tatgtgcacg tactctcctc ccctcaataa gctattctgc cagctggcga agacgtgccc       420
tgtgcagttg tgggtcagcg ccacacctcc agctgggagc cgtgtccgcg ccatggccat       480
ctacaagaag tcacagcaca tgacggaggt cgtggaagac tgccccacca tgagcgctgc       540
tccgatggtg atggcctggc ttcttcccag catcttatnc gggtggaang aaatttgatt      600
cccagtatct ggaaagacag gcagactttt cgncacaccg tggtggacct tatgagccac      660
ccgangccgg ttntgagtat ccaccattca ctacaagtnc atgtgnataa ctcctgcatg      720
gggggcatga accgccgact atcttacatc ntaccctgga aaattcaggg gaac            774
```

<210> 193
<211> 279
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(279)
<223> n = A,T,C or G

<400> 193
```
agctgttcca ccatactcct cttnccccaa tccttaccag acggctgtgt acccagtgag        60
aagtgcctac ccccagcaga gtccatacgc ccagcaaggc acgtactaca cacaacctct       120
gtatgcagca cctcctcacg tcattcacca caccacggng gtgcagccca atggcatgcc       180
agcaacagtc taccctgctc ccatcccctt nntnctagag ncngcgggt caccatgggn       240
gatggctgct gggaccacga tggccatgtc agcaggtac                             279
```

<210> 194
<211> 485
<212> DNA
<213> Mus musculus

<220>

51

<221> misc_feature
<222> (1)...(485)
<223> n = A,T,C or G

<400> 194
ctgaagcccc cgggtggaga tngnncgatc tttttggaag tccataagaa ggtatttctt   60
caagcangcc taataggatg gcatctaata ttttcggacc aactgaagaa cctaaaaaca   120
tacccaagag gacaaatcct ccaggaggca aaggaagtgg gatctttgat gaatcgactc   180
ctgtgcaaac tcgacaacgt ttgaatccac ccggggggaa gaccagtgac atatttgggt   240
ccccagtcac tgccactgcg cctctggcac acccaaacaa gcccaaggat catgtttttgn   300
tgtgtgaagg tgaaactct aagtctgacc tgnaggctgc ancagactcc acacccagag   360
gagagcagag tgacaaagga agctcaaaag aagtagagca tgcnaagata ccggagccca   420
cacctacagt tgacagtcat gaacccagac tggggccacg acctcgctcc cacaacaaag   480
tcctg   485

<210> 195
<211> 464
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(464)
<223> n = A,T,C or G

<400> 195
tgggcctaca aatcatatgg ctcncactcc tgaccnanng cncagccccc antcccaccc   60
tgagatttgt ggctgtgggc gactggggag gggtccccaa tgcccattc cacacagccc   120
gggaaatggc caatgccaaa gagatcgcca gaaccgtgca gacgatgggc gctgacttca   180
tcatgtctct ggggggacaat ttctacttca ctggagtgca cgatgccagc gacaagaggt   240
tccaggagac ctttgaggac gtgttctctg accgtgccct tcgcaacatc ccctggtatg   300
tgctggctgg aaaccatgat caccttggca acgtctctgc acagattgca tactctaaga   360
tctccaagcg ctggaacttc cccagcccctt actaccgttt gcgcttnaaa attccacgta   420
caaacataac tgtggccatn tttatgctgg acacagtgat gctg   464

<210> 196
<211> 395
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(395)
<223> n = A,T,C or G

<400> 196
cctgacaatg agaaaagctc tagaagcagn ccaaagcata tacaactcat tntctngctn   60
nagtgggtna tgaagataga tgnanttncc tcgcacantn ngcncnaact nctggtatnt   120
ncangcntcn naantgngga ggagggcgtc ntncatcaat cacatctcac aggtaccagc   180
ttgcaaagac ttctgggttc atttttagtc aaatagcagc atgtgtctta agcatagtca   240
tgcattgctt agtgaggagg atacatatct gctaagaaat gtcactagga gatgttactg   300
tggtgtagag agcacctaca tagnctgcat ggtatataag tntacccact atttcctatg   360
gatattgtta agagngggaa atgcaaggtg catga   395

<210> 197
<211> 470
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(470)
<223> n = A,T,C or G

```
<400> 197
acatccattc ccggctacct gaacccttcc agtaggacgg aaatcctgca tttcatagac      60
aaggcaaagc ggtcccacca gcttcctggg cacctgactc aggagcacga tgctgtgctc     120
agtctgtctg cctacaatgt caagttggcc tggagggacg gggaggacat tatcctcagg     180
gtgcccatcc acngatatcg ctgctgtctc ctatgtcccg agatgatgct gcacacctgg     240
tggtcctgaa gacagcccag gacccaggca tctctcccag ccagagtctg tgtgcagaaa     300
gttctagagg cctcagcgca ggttccttgt cagaaagtgc agtggggccc agtagaggca     360
tgttgcctgg tcatcatggc cncagagagc aaggtcgccg cttgaagagc tgtgctccct     420
gctcagccng gtcttccaga tttgtttaca cggagtccac catcgacttt                 470


<210> 198
<211> 489
<212> DNA
<213> Mus musculus


<400> 198
tgaggtcctg cccaccaagc catgtcttct aggcagcacc tgggctctgc tccgcctccc      60
tctaccactg atcaggatat gctctgggaa gtgggggctc aggcttcagg agaagccagc     120
actgctcttc ccaggaatgg ctgccagcac agtacaggtg gcaggcagga aggactaccc     180
tgctctgctc ccctgaatg agagtgagct cgaagaacag ttcgtgaaag gacatggccc     240
aggggccag gccaccaaca agaccagcaa ttgtgtagtg ctcaaacacg tgccctccgg     300
cattgtggtc aagtgccacc aaacaagatc tgtggatcaa aacagaaga tagctcggaa     360
agtcctccag gagaaagtgg atgttttcta caatggtgaa aacagccccg ttcacaaaga     420
gaagctcgag gctgagagga gaaagcgaga gaggaagaaa agagcaaagg agactctaga     480
aaaaaaaaa                                                            489


<210> 199
<211> 496
<212> DNA
<213> Mus musculus


<220>
<221> misc_feature
<222> (1)...(496)
<223> n = A,T,C or G


<400> 199
gactgaggac agtgtctacg tatatgtacc aaggntccaa ggangtagat gncccttgtgg     60
ctggaggcct caatgcctga tgtttctcct gattctgcaa cggagttgtg gaagacagaa    120
cctcaaagatg caggagacca gggaggcaac acttgcatcc tcagggagga agccaggatg    180
ccccagtcaa ctggggttgc tttagggata gggttggagt cagcagagcc tacagccctg    240
ctccccaggg cagagaccct cccagagccg acagagcttc gtccacaaaa gcggaaaaag    300
ggcccagccc ccaaaatgct ggggaacgag ctgtgcagtg tctgtgggga caaagcctct    360
ggcttccatt acaacgtgct gagctgcgag ggctgcaagg gattccttcc ccgcagtgtc    420
atcaagggag cacgctatgt ctgccacagc ggtggccact gccccatgga cacctacatg    480
cggcggaaat gccagg                                                   496


<210> 200
<211> 378
<212> DNA
<213> Mus musculus


<220>
<221> misc_feature
<222> (1)...(378)
<223> n = A,T,C or G


<400> 200
agcaaagtcg gcctcaaaaa cagagaaggc aagatggctt ctgaatcaga aactttgaac     60
cccagagctc gggtcntnan ctntatnnnn ancatnnnan ngcctaggnc cgtnatcann    120
gtnngtgaga nnnccttgna tcttgagnag attanntgcc cnnatactag acaagggcca    180
gggctcagga agnnngagng gntggnncat ggctagcaan ggatgagggt gatctagtca    240
tccctgcgcc catccagcag ctggtgactg gacagtctgg cctcttcact cagtacaaca    300
```

```
tacagaagaa agccattgac cgttcgtgag ttccgcaaga tcgccaatag ctgacaatgc      360
actggtgttt tatctgct                                                    378

<210> 201
<211> 385
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(385)
<223> n = A,T,C or G

<400> 201
ctgtatatgg gcttgcctgg cccacccgag cagacttcgc agactctgga gaggccctaa       60
tgtcacantn ctgactggtc tcaccagagg caactctnga atnttttacc gagaggtgct      120
gccaatccag caggcatgca gggcagaagt cgtgtttctc catggaaaag catttaattc      180
ccacacatgg gaacagctgg ggacattgca gctactgtca gagaggggct accgggctgt      240
ggccatcgac cttccaggtn ntgggaactc agccccttca gaggaggnga gcacagaggc      300
aggccgagtg gagtagctgg agagagtgtt ccaggaccta caggtgcaaa atactgngnt      360
ggtgagcccc tcactgagtg gcaag                                            385

<210> 202
<211> 491
<212> DNA
<213> Mus musculus

<400> 202
tgaggccttg tacagctcca tcaagaatga aaaattgcaa tgggccatag acgaggagga       60
gctgcgacgg tctctgtccg agttggccga tcctaacccc aaggtcatca agcgggtcag      120
cggaggcagt ggcagcagtt ccagcccctt cctggacctg actcctgagc ccggggcagc      180
tgtctacaag cacggggccc tggtgcacga ggtgcacgca gaccctgact gcaggaagac      240
acctcgtggc aagcgggggct ggaagagctt ccacgggatc ctcaagggca tgatcctcta      300
cctgcagaag gaggagtatc agcctgggaa ggctctttcc gaggcagagc tgaagaatgc      360
tatcagcatc caccacgccc tggctacccg cgccagcgat tatagcaaga gaccacacgt      420
cttctacctg cgcacagctg actggcgggt cttcctcttc caggctccga gcctggagca      480
aatgcagtcc t                                                          491

<210> 203
<211> 346
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(346)
<223> n = A,T,C or G

<400> 203
tcaatgagaa gacagnactc tgcacttggc tgtgcattca cccccaagtg tatggaagcc       60
atntngaagc agctnctcaa ttctcctgcc atgtctctct gttcaggatg ttcctgccac      120
tgaacccgag cctggcatcc agcaagcgct agccaagagc ttagcagtga ccacttgtct      180
actcatcggg ggacggccat cagcctggag gtgaaccagg gagagtcttg actataggca      240
cggccccagc atcagtggga tcttgggga gactttgacc atcagcagag gaggtttggg      300
gggacaatgt tattaaaata aaatgaccct tgccaagaaa aaaaaa                     346

<210> 204
<211> 177
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
```

<400> 204
aaggctgaca agcaccanat ggnaaaggca gngaagaaac tctatggcat tgatanggcc   60
aaaggcgtac gtttagcagg cttctgacta tgacactctg actgngacaa gaatattggg   120
atcatctaaa cngagtccag ctggataatt ntaaatatac ttttcccccct acaataa   177

<210> 205
<211> 230
<212> DNA
<213> Mus musculus

<400> 205
actgaggata tgctgtcatt ctgggctgtc gtaatatatt tctctgcaga agagtgggaa   60
tacctgggtc ctgctcagtg gaaattatac agggatgtga cattggagaa ttacaacaac   120
tttgtttttc tggatcttgt ttcctctacg ccatacctgg tcagatttct ggagcaaata   180
caagagcctt cagatgtgaa gagtcaagca gacatctcta tgtactcagg   230

<210> 206
<211> 328
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(328)
<223> n = A,T,C or G

<400> 206
tgacaccatc aaaaccaacc ctgatgacag aagaatcatc atgtgtgcct ggaacccaaa   60
agatcttccc ctgatggcac tgcctccttg ccatgccctc tgtcagttct atgtggtgaa   120
tggggaactg tcttgccagc tttaccagag gtcaggagat atgggtctgg gcgtgccctt   180
caacattgcc ngctatgctc tgctcaccta catgattgca catatcacag gcctgcagcc   240
aggtgatttt gtccacactt tgggagatgc acatatntac cngantcata tagagnnggt   300
gaaaattcag ntacagcgag aaccaaga   328

<210> 207
<211> 385
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(385)
<223> n = A,T,C or G

<400> 207
actgaggtgg agtctttcct gctagaagaa gaaggacaag gtgctgnaga aggncgnccg   60
gatagnactg aagaaagaag tagtggagga ggaggagaat ggagctgngg aagangaata   120
cgaaactgca ctggatggag aggatgntga tnaaggnnnt gaagacnatg atncagctan   180
gcggcgctct nntcatgncc ccctgccctt gggcttgtgt tttggntttc ccttcnngtn   240
ctggnggtgg nccgggancca cacacatccc gcccccttc tcctgtctcc ctgctctggc   300
cctncccag agctgtgacc cttgtccttt gacccancct ctcntttcca tctctcctc   360
nctgctcctt ccccttctgc ctccg   385

<210> 208
<211> 185
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature

55

<220>
<222> (1)...(185)
<223> n = A,T,C or G

<400> 208
catgaggaat tggaaaactc ttctgaggat tacctntcca gcctaaggtg tggggaccct   60
gaacatccag agngcttttc tagnctcaac attacgntgn ggcactttac cttgganggt   120
nagcaggngg nccnttgtat ganattgtga aaacctcntg aaccttctag cagaggtggc   180
tcgaa   185

<210> 209
<211> 472
<212> DNA
<213> Mus musculus

<400> 209
cttgcttggc tcgtccaggt gccaacagga ccctggttct gcaggaaatg tgaatctcag   60
gagcgtgcag ccagggtgag gtgtgagctg tgcccgcaca aagatggggc attgaagagg   120
actgacaatg gaggctgggc ccatgtggtg tgcgccctct acatcccgga ggtgcagttc   180
gccaacgtgc tcacgatgga gcccatcgtt ctgcagtacg tgcctcatga tcgcttcaac   240
aagacctgtt acatctgtga ggaacagggc cgggagagca aagctgcctc gggagcctgc   300
atgacctgta accgccacgg atgccgacaa gctttccatg tcacctgtgc ccagatggct   360
ggcctgcgt gtgaggaaga agtcctggag gtggacaacg gtcaagtact gcggctactg   420
caaataccac tttcagcaag atgaagacat tcccggccac ttccagcggg gg   472

<210> 210
<211> 863
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(863)
<223> n = A,T,C or G

<400> 210
gatctgagtg tggctctgta caaacatttc ctttcccctc gcgatgggga gacctgctcc   60
ggtgcatcca gagaactccg catcctctgc tgtgatatag atccagtcct tgtggagagg   120
gctgaaagag actgtccctt ccctgaggct ttgaccttta tcaccctgga catcatggat   180
caagagagca ggaaggttcc cttgagttct ttcttgagcc agtttgggcg ttccgttttt   240
gacatggtct tctgcatgtc agtaaccatg tggattcatc tgaaccacgg ggaccgtggt   300
ctgtgcgagt tcctggccca cgtctcctct ctctgcagct acctcctcgt ggagccacaa   360
ccctgcgaagt gttaccgggc agctgcaagg cgcctgcgca agctgggact ccacagtttt   420
gatcacttcc gctcgctggc catccgaggt gacatggcca agcagatcgt gcggatcttg   480
acgcaggacc acgggatgga gttagcgtgc tgtttcggca acaccagttg ggaccgaagc   540
cttctgctct tcagagcaaa gcacacccac gagactangc aatccccgaa tcgtcaacaa   600
aaagagacac ngacagatta agaatncgaa aggccacggg acacacacca gtaaagagat   660
acccggggag cttttaacac cggagaaatc gagtttggat cccagagaca tcaggcaagc   720
ctttganaac tggcaaggg ctttggcna aaatgtcttg aaaccaagcc ggcttgaaaa   780
gggcnccagt ncccgggttn ccctggttg gntttggnaa aaaacttncc cnccgggnaa   840
atgaaattcc cccgggggac aaa   863

<210> 211
<211> 143
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(143)
<223> n = A,T,C or G

<400> 211
cagagactga ccagtgtgga cgtgcggaac acagnagact caccagtgtg gattaggacg   60

```
tgcctcttga ggtggtaact gctccgaaag gctccaaagc agtgttcaca aataaaattt        120
ttgggaatct ttaaaaaaaa aaa                                                  143
```

<210> 212
<211> 250
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(250)
<223> n = A,T,C or G

```
<400> 212
aaaccttact ggaacctcac aggttatagg ctacaccttg cnaaaaccat tantatnnga         60
aagacttgt caaagntcaa gaagaaatga naggnatcgt aagtnatcat agcgnatgag        120
aaactctatn attttttctg agnggggggt anagcctttn cattgtccca ctcatctcca        180
aagngactat aagaagacnn ntnggagata agancncatn gaacattaac caactgtggg        240
taaagcgctt                                                                250
```

<210> 213
<211> 399
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(399)
<223> n = A,T,C or G

```
<400> 213
atggaccgag ccctctgcaa tacaaccgct gtttggaaac ttcatcttct tactgagcct         60
ggctgtctgc tacatgctcc ctgtggagtg gaacatccgc agacatttta aaggaacagc        120
tttgtgtccc accanaggtg ctgaggactg aacacatgga ctcatacatc atacatgggt        180
aagctctccc atctatcacc tagcttcagg tttgtcagcc atctctccac atacacatta        240
agcatntgaa ataagacact gctgatattg gatgatagca aggttcagaa gacctggcag        300
aggatnttcg atgancttct gtcctcaagg aatcgantac aggacttcta cttgcagaaa        360
aggcaagaat ggctnattag ggaaaaagga tattcccaa                               399
```

<210> 214
<211> 323
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(323)
<223> n = A,T,C or G

```
<400> 214
atgaccgttt tgatgaanat gacaaagatg attctgnctg gntnttanac catgattatt         60
tggaaaacat gnatggggatg ntcaagangg tcantgccat anaaaggata gttgggtggt        120
nccacacagg ccccanttnt gcacangagg ggatatccgc catcaatgaa ctcatgaaga        180
gatnctgccc caactcanta ttggtcatta tcnacgngaa nccaanggac ctangacttc        240
ccaccgaanc ctcacatcctc agtgnaggaa gctcatcgac tatggnacgc caacgtcaat        300
anacttttga gcatgtgact agc                                                 323
```

<210> 215
<211> 416
<212> DNA
<213> Mus musculus

<220>

```
<221> misc_feature
<222> (1)...(416)
<223> n = A,T,C or G

<400> 215
cccagtcacg ttaaatgtag gtggacactt gtacaccgac atcgcttacc acagttgaca      60
cgctacccgg attctatgct tggagctatg tttgggggtg acttccccac agcccgagac     120
cctcaaggca attacttcat tgatcgagac ggaccgctct tccgctatgt ccttaacttc     180
ctacggactt cagaactgac actccccctg gactttaagg agtttgatct gcttcggaaa     240
gaggctgatt tctaccagat cgaacccttg attcagtgtc tcaatgaccc caggcctctg     300
tatcctatgg atacttttga agaagtcgta nagctgtcta gcactcggaa gctttctaaa     360
tattccaatc cggggggccgg catcatcncc cantttaacc attcacccccc gaaagg       416


<210> 216
<211> 317
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(317)
<223> n = A,T,C or G

<400> 216
gatgactgcc tgcctttnac cttggagacn gtgtacagct ggnanctgna agcctgggat      60
gaggatctgc aggaggtcct gtcctcagat gaaattgggg gcacctatat ctcatccccca     120
ggaaacgaag aggaagaatc aaaaaccttc actactcttg accctgcgtc cctagcttgg     180
ctgacagagg agccagggcc aacagaggtc acacgcacat cccaaagccc tcgctctcca     240
gattccagtc agagttctat ggcccaggag gaagaggagg aagagcaagg aagaactagg     300
aaacggtaaa cagagtg                                                    317


<210> 217
<211> 235
<212> DNA
<213> Mus musculus

<400> 217
acacgaatag catagtcatc tggaagagaa gaaacaccag tcactccctt cgaggagtct      60
actgaggaag aaagagaaca ggaggaggcg gctgctctca aaatccagtc cctcttccgg     120
ggacacgtgg ctagagaaga ggtaaagaag atgaagtcag ataagaatga gaatctgaaa     180
gaagaggcag acaatctgag accacaggtt ttacacccccc gaaacatgaa aagta         235


<210> 218
<211> 355
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(355)
<223> n = A,T,C or G

<400> 218
acaacgttcg tgcggntcgg tnaggggttg tgngctggcc ctatgacang gatgaatggc      60
cagtcaacaa aagtgagcat ctttcctgtg ctttcacatt cttccttcat ggagagagta     120
accgtgtgca caagtgtgga gatagctcag caccagccga tctatttgat caacgaggac     180
gggctgtaaa ctagatattt gtaatcttta ccacttggga ttgcttcctc tcagagttca     240
ccagaacttt gaatttctct ctctctctct cttttttaaa tgggctgttt ttactgcagg     300
ggcttttctt ccctagaaac ccaactctac gcagaaaaag tgaaaggaa aaaaa           355


<210> 219
<211> 120
<212> DNA
```

58

<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(120)
<223> n = A,T,C or G

<400> 219
ttggttccac gtacgtcagn tctgctcatt atcantgacg gcggnatctg cgacgtgaca   60
cataccatag angccatcgt nagtgccttc tcactgccca tgtactatca ttattgtcgg   120

<210> 220
<211> 265
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(265)
<223> n = A,T,C or G

<400> 220
gggagcagat ggactatgga ctacagttta cctcctcgcg aaagttcctc agcatctctc   60
ctattgnact ttacctcctg gccagcttct acaccaagtn cgatgctgct cacttcctca   120
tcaacactgc ctcgctgctc agcgtgctgc tgcctnngct accccagttc catgggggtnc   180
gactctttgg aatcaacaaa tactaaanga nggttggcta gttctgcagg cattgaggga   240
aggcactgga actaagatat aatgt   265

<210> 221
<211> 375
<212> DNA
<213> Mus musculus

<400> 221
gactgagcct ccctgctgga gagggagcac cccccccacc ccccagggcc tggagcctac   60
ctgccagcat cctgggagat ggtaacagac acgtccagtc ccagtgtggt caccctttg   120
cacacggcgt ccatgtcgat gatggagtcg atgctctcgg gaccatcctc cacgcagcac   180
tgagagccgg ggcagaaccg gcaattatcc agtcctttgt aacccttgtt gtgcccacat   240
ttttccagcg tcactgtggt ggccatgccc gacacccaaa catgcactac gagctggga   300
caagagacaa ttggggacg gttagcagga gcagcaccca cccatacatc gtgagatgcc   360
aggacttgga aggtg   375

<210> 222
<211> 102
<212> DNA
<213> Mus musculus

<400> 222
acctagcaga tgtcacacag acgataaata gcaaagatga aagtcttcat gccggaggca   60
atcctataag acagctgagt tctgcagagc tggagacaga ct   102

<210> 223
<211> 498
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(498)
<223> n = A,T,C or G

<400> 223
ttcctctctc gttcaaatcc tgttagtgca atgatcaaan tctgtngacc cacatnatcc   60

59

```
gcctagtgtn caacgaggtg acnacactga cggnanaccc acctganggg attananact      120
tccgcaatga tgaggtatct ncacagacct gcaggttacc atcgagggcc ctgatangga      180
ctncctatgc tggaggtctg ttccgtatga aagctcctac tggggaagga ctncccctgcc     240
tccccaccca agggctactt cctgactaaa anattccacc caantggtgg gcccccaatt      300
ggccgagatc ntgntgncca natgtgcttc aannnagngg acctgngann ggnnctgnaa      360
tctggggctt taccnaatat agtagcctng gttgcnccaa tnaaangngn ccttggtctg      420
gatncccacc ccttaaaccc cannaanttc tggnannttc aattagaaan gaagggcaaa      480
ggcccgccct ttgccttt                                                    498

<210> 224
<211> 502
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(502)
<223> n = A,T,C or G

<400> 224
agactgagaa tgctcgtgat tcctgtccct tggattgtaa ggtttatgta ggtaatcttg       60
gaaataatgg aaacaagact gaattagaac gggcttttgg ctattatgga ccactcagaa      120
gtgtgtgggt tgctcgaaac cctcctggct ttgctttcgt cgaatttgag gatcccccgag     180
atgctgctga tgctgtccgg gaactagatg gaagaacact gtgtggctgc cgtgtaagag      240
tggaactgtc gaatggtgaa aagagaagtc ggaatcgtgg gccgcctccc tcttggggtc      300
gtcgtcctcg agatgattac cgcaggagga gtcctccacc tcggcgcaga tccccaagaa      360
ggagaagctt ttcccgaagc cggagcaggt cactttctag agataggaga aaaaaaggt      420
ctcttgctc gtgagagaaa tcacaagccc gctcgatcct tctcttaggc tcgnaaccca      480
tctanggcca atgaaaggga at                                              502

<210> 225
<211> 556
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(556)
<223> n = A,T,C or G

<400> 225
tgccgctgtt cctcctgctg agagccctga gctattcnan agatgacact gnntgcngct       60
gtnggaccnc cgcagccacn ctctnncgcg tcggcnctcc ctccttggac ngnnattnta      120
tgaataaaca tcnnaaccag tactatcagg ccagcggttc aaaaacccgga aaagggatga     180
agaaaagaat ttcnaacccca cnctttncag ggatacactt gtccaggggc ttantnaacc     240
tggtgataac cttgaanctg tagccaaatt tttggattct actggctcac nattagatta      300
ccgtcgctat gcaaacacac tctttgatat cctggtggct ggcagtatgc ttgccctgg      360
aggaacacnc ntnnacaatg gtgacnagga ccaagatgac canccactgt gtgtttcag       420
caaatgaaaa tcatgaaacc atccgaaact atgctcaggt cttcaataaa ctcatcgggg     480
agatacaatt tatttggaaa aggcatttga anatgaaatg aaaaaacttc tcctcttcct     540
taaagcattt tctgaa                                                      556

<210> 226
<211> 198
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(198)
<223> n = A,T,C or G

<400> 226
```

60

```
aacgacgaaa catcancaga actttattga gantggattc tgagactann catgacactg        60
angaggcacn gcaagtgact cctncaatga cnagntccan gagatccatn ngcaanaatc       120
tatgggnggg ccggggggccc cagtccnttt catgcaggat ntatctgcga ctttcagaan      180
ntgggggaggc tgacattg                                                     198

<210> 227
<211> 446
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(446)
<223> n = A,T,C or G

<400> 227
agtctgagct ttgacgactt cctggacctt ctgagtcgtt ttcanngaca naggaacccc        60
nnacatgang ccncactatg ncttncgnat cttngactnn tnngacnatg gacccntgga       120
cagagaagac ctgagccntc ttgagaatct gcctcacagg agagagggcg aggacactng       180
gctaanacgc ttctgagatg aacccagntg attagacaat nncctggaag agtaanacat       240
ctgacagggn tgggaccatc tatnttnccg aggtccaaca tgtgatctcg cgctcaccag       300
actttgccag ntncttaag atngtnctgt gatgtcttnn aagnnccaac atgcctggcc        360
aaggacctg ccactgctga gatgtggcca aggttatgcc tgcggtgnca ggnccngtgc        420
cggcccagnc tggagagggc gctgga                                            446

<210> 228
<211> 354
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(354)
<223> n = A,T,C or G

<400> 228
ccccactgtt tcaggdatgt acacgatcgg agacattgtc cacagttgnn gagtgcactg        60
cccctgacca ggactgtgcg atnnactgtg ctcanggtcc ccaaggctgc tgggcnanga       120
agncgnntca gaantnctaa ggggactctg gccaatgnnc tagancaant naagttnttt       180
tccaacgtnt aaaaacacat anaanaccnc cagcctatgn cccncttctg ctcccggatc       240
acgtcctgtc ggtaacatta gccacagtcc aaagatggca cagccaagga tggagccaag       300
tctccacacc aaaatctatg atggcccacg tctgactcaa gttaaaaaaa aaaa             354

<210> 229
<211> 186
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(186)
<223> n = A,T,C or G

<400> 229
gttgccagtg ttgctgattg ngatacaaga tngnaaggag ccngggtntt ncattggana        60
ggctcttctc cctggagcat cccggcttct atcttacaag atgcttgnat acagncttct       120
gataaagatc tggaacgcct ttcnggntgc tntataggag ggaanttctg ttatattgga       180
gaacac                                                                   186

<210> 230
<211> 665
<212> DNA
<213> Mus musculus
```

61

```
<220>
<221> misc_feature
<222> (1)...(665)
<223> n = A,T,C or G

<400> 230
agcaagctgc acatggaagg gttccgaagc ctcaaggagg gtgaggcggt ggagttcacc      60
tttaagaagt ctgccaaggg tctggaatcc atccgtgtca ctggccctgg tggtgtgttc     120
tgtattggaa gtgagcggcg gccaaagggg aagaacatgc agaagcgaag atccaaagga     180
gacaggtgct acaactgcgg tgggctagac catcatgcca aggaatgcaa gctgccaccc     240
cagcccaaga agtgccactt ttgccaaagc atcaaccata tggtggcctc gtgtccactg     300
aaggcccagc agggcccag ttctcaggga aagcctgnct acttccngna ggaataggaa     360
gagatccaca gccntgncct gctccnagaa ncccagaatt gangcccagg agtcagggtt     420
attctttgct natggggagt ttaangaaag aggcatnaat ctgnacagtg ntnaangtgt     480
nngtaanggt nggntttgcn tggnntancn ttngnctgnc gagncntnnn gccggncttc     540
ccaacgtcat cctgctttcc ttnaagntan tgaaaggatt aggcnaatgg aactctaccc     600
nactnttnnc tgaagcnagc gaagctttn tgngggagga accnccttg aaccccgagg     660
cttt                                                                  665
```

```
<210> 231
<211> 105
<212> DNA
<213> Mus musculus
```

```
<220>
<221> misc_feature
<222> (1)...(105)
<223> n = A,T,C or G
```

```
<400> 231
tagtctggaa ccacgccgng ggaggatcta cagaaatatt gctggcgcag acacatttcc      60
agttgtctga ggtggccagg acattactcc cgtgcgcctt accca                     105
```

```
<210> 232
<211> 199
<212> DNA
<213> Mus musculus
```

```
<220>
<221> misc_feature
<222> (1)...(199)
<223> n = A,T,C or G
```

```
<400> 232
accattttg attttgtac ccatataaag tctctgaaac tcaagtcaag gaatcttctg      60
aagacaaca acagttttcc tccaactgga ccatgtaatt taaagctgaa cggcagtcag     120
caagtactgg ttgancacag ttatgccttt aggaacccta tggaggcgaa aaaaaggata     180
attaaactag aaaaggaaa                                                  199
```

```
<210> 233
<211> 530
<212> DNA
<213> Mus musculus
```

```
<220>
<221> misc_feature
<222> (1)...(530)
<223> n = A,T,C or G
```

```
<400> 233
ggatcatgaa gtgatataca gtcatnttca gggaccatta nagggtncta tagaaccagc      60
tactccaact gaagtcgtca gcaatggggc acctctncag cctgnccctg ctgaactggc     120
caatagccaa gggnggagcac atgttcagcc tgccctgnt gaagtggtca gcagccaana     180
```

```
tggactgnnc actctacagc ctctgncacc agcatncatt gatttgacgg aggaagtaca      240
gccctcagaa gaaaatatgg aggttgtcaa tcctggaact tcagaggagc ctagtcaggg      300
atctggtgct aacccaaccg ccggagctgc tagatccgtt tcaatgaaca acttcatcag      360
cnggctgcag aggcttcata acatgctgga attgctgana cctccacctg cagaccacag      420
tgtgggggcca ntaanancaa ggaggaggat ggcacccatt ttgagggcca gagctggaga      480
gtctcanagg caagacaatg gcaggtatgt gccacataca ccactatatg                 530

<210> 234
<211> 281
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(281)
<223> n = A,T,C or G

<400> 234
gaactgagag aagaaganaa tgaggcnaag attgaaaatg tgcagcaaaa caggtttcat       60
caaaggacca gtgttcaaag gtgtngcttc aagtcgattt ttgcccaata ggcacgaaga      120
caaaagttaa tttggaggaa cagggacggc aaaaggtgtc attcagcttc agttttacaa      180
agaaaacttt acagaataga tttctcactt gcgcttagca atgaaaagca aagtgattct      240
ccaaactccc cagctcccccc tnttcaagta gactcaaaaa a                        281

<210> 235
<211> 353
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(353)
<223> n = A,T,C or G

<400> 235
tgagtttgtg agggactgca gtatggcttc atttccttgg tgcgtttgta aaatagttca       60
cccattgaag accatgaagg ttctttccaa tgctgccctg cttttgctgg tgtcttgctc      120
ctggaagttg tgatgctaaa gnnttatgat gtantgactg ngatttcacc tccaganttn      180
ngatgactct ncgacattgg nnngatnang cggnnnactt ctangactga aggccatggn      240
gtgtgtggat catggtaaac tcaccaannc aagtnatgcc ctngagatga tcctncttaa      300
actngtcatt gcactcttt gttgacnccc agnctttgct gtattacatt aaa             353

<210> 236
<211> 448
<212> DNA
<213> Mus musculus

<400> 236
gactgagaga tgttatgaac ataaacagta tagaaatgga ttgaagttct gtaaacaaat       60
ccttttccaat cccaaatttg cagagcatgg agaaaccctg gctatgaaag gattaacagt      120
tgaactgttt gggaaaaaag gaagaagctt atgaattggt tcgcagaggt ttgagaaatg      180
acttaaagag tcatgtgtgt tggcatgttt atggccttct tcaaaggtca gacaagaagt      240
atgatgaagc cattaagtgc tacagaaatg cactgaaatg ggataaaagac aatcttcaga      300
tcttaagaga tctttcctta ctgcagattc aaatgcgaga tcttgagggc tatagggaaa      360
caagatacca gttgcttcag cttcggcctg cacagagagc atcatggatt ggttatgcta      420
ttgcttacca tttattagaa gactatga                                        448

<210> 237
<211> 227
<212> DNA
<213> Mus musculus

<220>
```

63

<221> misc_feature
<222> (1)...(227)
<223> n = A,T,C or G

<400> 237
gaggcctcag cagttctacc tgtcatcana tcaggagcat cagtgttgct gccgcgttga   60
atgagnatgg ctgcaaagct attctcatca aatgatgtcc cattcaccac agggaggtct   120
tcaaaggggt ttacagactg gtctgaagac acagtgatgt actggacggc cagccagagt   180
gcagtgctgc cttcgttgatn tttcagctct aaatctaatc tgaaata   227

<210> 238
<211> 539
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(539)
<223> n = A,T,C or G

<400> 238
gaaagaagct gacgacagaa gggctgagga cctgggcacn accacttacc gaccacttcg   60
tngnctggct gaaagancgt taccttcctg ccaactaaag agcagaaata gtctacagat   120
aaggaaaact gaagtaaaat ggcctcataa tcaatncatc ctttggtacc aagatatgta   180
cacacggaca gctctccagac ggaatcctag ctgcatagag tgctcatcct gccaaatnag   240
cccaggctct gctcactagt gattccacac actagcaatt ccacatggta ggtcatcatt   300
gcccttnttg aactcaagtg caagtgtaag tgtgagctca cctggctatg ccatgtatct   360
tactcataaa cctcttccca tcgccctgag gccaactgct tatcacctcc tgctgacttc   420
ctttcctcac tattgcttcc gtcggtcagt ccctcttctg tcatcactgt ttagcttatg   480
gactttgntg nngggagccg cgcccacatt tcgncgntac aagatggcgc tgacagctg   539

<210> 239
<211> 135
<212> DNA
<213> Mus musculus

<400> 239
gactgagagg cttctcgaga gacgaatgct gttctgtgcc tgatgaaagg cttgaaactg   60
acgagcggaa aagaaatttg ttctattctt aaatggggac aaataaatga taaatatctt   120
ttctaaaaaa aaaaa   135

<210> 240
<211> 486
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(486)
<223> n = A,T,C or G

<400> 240
caggtaggcc tgccaaacgt atangtganc cccctgtnca natgatgggn ttcctgngag   60
ggagagnccg gtgaccgaca tgcctantga gcctggcact natggtgctg aatcccggnc   120
tggntgcctg nggatcagca gacaattggg gcctgggcg agtctctggt acgcctcatt   180
aacgaccgag gagacgggga agggtacgga ttatggttta gggctagatg cagccgtang   240
ggccaccgta taccaggtca gaagccaaac gaaangtcaa acacccagcg ggcaagctcg   300
cgacgcgcct cagcaacgac accgccaagn tctcgtggga ggagcgcgac tggcggcact   360
ctcgcggaaa gtggaagctc ccgcaagcag gcgggggggcg tgaccgnaag aaggtgtatt   420
tcaaagtggg taatagatgg ttttctcacc caataaaant gcaatttatc ctcctaaaaa   480
aaaaaa   486

<210> 241

64

```
<211> 154
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(154)
<223> n = A,T,C or G

<400> 241
tgatttaccc actgaggacc cttagatcct gtggatacct ganaattgat tcatctgtnt      60
gtagctgagg cttggcacct gcaagctttn cctctcctgg catttcacca agcccccgag     120
ctcacagggc tctggctccc ctgaagtcct gggt                                 154

<210> 242
<211> 375
<212> DNA
<213> Mus musculus

<400> 242
agaagtgttt ctattttgag tgtcgaacac aacactcgaa agcggctcac aagcaggagc      60
ccggattagg gtttagtttt ggtatgtgtc cctcccttttg acttgaaggt ctgcctgggc    120
tgtgtctgta acatgatgtc tgttgatgag tggagcagac acctgcccac agttggctcc     180
tggtaactcc cgtctgctgg actgcgttgc cttcttccgt atgctctccc gaaaactgcg     240
ttgccttctt ctgtatgctc tcccgaacac tcaagtgttc tcaggcggcc tctatggtgt     300
ccttctcctt ctttcccaaa tggtagccca aataaatgaa tatatatgaa tcgttttcaa     360
cctacaaaaa aaaa                                                        375

<210> 243
<211> 153
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(153)
<223> n = A,T,C or G

<400> 243
gcctctggga tctcttcctc cttcnngnag cggactgacc acagcaggat cttcttctca      60
aaatctgtgg gcttgtgcag cnggcacccc gtgtctgtna gactctgtgg ggaaaacagg     120
aatctggctt gagactttaa tgctcaaatc aag                                  153

<210> 244
<211> 239
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(239)
<223> n = A,T,C or G

<400> 244
aaaatgccat aagtcctgtg ccatnaagaa tatgctngac ctnctttgag aaaaccaacg      60
agatgcgttc tgaacttcaa caatcatgtc catgngtgct ggctgcaaca gatgagtgag     120
cggctttcat ncaccagtac ccgcaccttg gnggnntgaa acnnngatct ggacagcatt     180
ttncaaagga tcaagacact nnaggggaaa ctaatnccag ncagcactcc ataggccttt     239

<210> 245
<211> 174
<212> DNA
<213> Mus musculus
```

65

<220>
<221> misc_feature
<222> (1)...(174)
<223> n = A,T,C or G

<400> 245
gaaaagattg aggaagtgtt tcacgtggaa ccccaactac agagactctt ttatagggc   60
aaacagatgg aggatggcca cacactcttc gattatgatg tgcagcctca atgacacaat   120
ccagctgctc gtgcgcnggg nggntggcac tgcctctcag tacaaaaaaa caaa   174

<210> 246
<211> 245
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(245)
<223> n = A,T,C or G

<400> 246
cccgaacctg ccaatnctac tttggcttca gtggatggtc gaaaaggatc atcaagggca   60
gtcctcgttt cttatgaaga ggaagacagc tcacaagctt gncttccaag gcgggctgta   120
ntcagatgcc ttcagatgc gtgaccantc ngnggntctg gaaagtggna ggntcgcggt   180
ggagtacagg cccacggggng angatntana tgccagaaag naaagaagag ctgcgagaat   240
ttaat   245

<210> 247
<211> 176
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(176)
<223> n = A,T,C or G

<400> 247
tgcccactca ctccattctc annacctctc ttcctcatgn nnatgaatca ggatggnaag   60
ttctnagnct acatgctcta gcatcatacc tgnctgncag atgccgngct ccctgncatg   120
atgntcntga actcaccctt taaaactgna agccctcnat aaagcctttc ttctac   176

<210> 248
<211> 399
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(399)
<223> n = A,T,C or G

<400> 248
cttgtctctg tgtagtagcc caaatcctaa tctccagtga aaccctccac atgcatgatc   60
ttggtctcca gcagctctgg acactgcccg tcaccgacac ctacctgatg tcaggactgt   120
cccgactctg gggaggtatg acatctttac gtggaagtca gttcccaaag gaactattca   180
gaagctagct cactgaagga gaccaagaac aagctggagt tgatcccctc actctgggta   240
agtgcacct tggtttggta cactcacatg gtgttcacag ccatttacaa ctccagttnc   300
aaaggatcta acacccttt ctgacctctc tggncatcag gcatgcatgt ggtgcacaga   360
cttacatgta ggcaagacac ataaaataaa aatgaagag   399

<210> 249
<211> 127

66

```
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(127)
<223> n = A,T,C or G

<400> 249
ccatccatga aagctctgag acagagactg ggtccangag tacattagca gccgnatngt      60
ntggangngg tcaganggtg tgntatattg aaggtnttcg ganntattat atctaggggg     120
ggggaga                                                               127

<210> 250
<211> 411
<212> DNA
<213> Mus musculus

<400> 250
gatgctgact gcagggatgg aggaactttt tccactgcag aagaacaatg tggtgcctat      60
gggaacatgc catgtgacca ttctccattc ctcccagcaa ggcacgctgg gtgatgtgaa     120
gaacccagga aggaaagctg gaggagagca tggtgggtgg cagagcggga tttgggggaag    180
ccctgagccc tgctccatct gaccctcagt acatctgtct ccgtcactgt ctacctgccc     240
tgctcacgcg tgccctcac tcacccccacg gcaacaggcc tatctttcc ccaacatcaa      300
aagagctatt tcagcgactg tcgctgtacc tggcccatag cctctagtct atatatgtct     360
gtcaaatgaa ttggctataa acatgaaaag gtttctcctg aaaaaaaaaa a             411

<210> 251
<211> 144
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(144)
<223> n = A,T,C or G

<400> 251
catatgagag cggagccttg cangnacctg gattccagag aataccacnn ccgctatggn      60
tctngncctg tattgggctg antacctgcc agnatccaca gaggtggttg tgncaccaca     120
gcaggaccca aaagacatgt attg                                           144

<210> 252
<211> 244
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(244)
<223> n = A,T,C or G

<400> 252
catggcggca tacaancatg tggtancgag atctgacgcc ctcttgtgga gngtctgaag      60
tcaactacng ttgtacttat gtataatant naatnnttct tttnnanaaa gttgacaaag     120
aatcnctana gcagcctcgg ccatncacag acagnctcgc gtttttctcc tactntgtgc     180
ttatgctntt aaatgcagca ctcgacgggg cngnggtggc ngcacgcctt ttaatccctg     240
cact                                                                  244

<210> 253
<211> 211
<212> DNA
<213> Mus musculus
```

67

```
<220>
<221> misc_feature
<222> (1)...(211)
<223> n = A,T,C or G

<400> 253
gaactgagat gacaacctga gaaagctaat tttaaaaaat gatgccgggt agcaagcata      60
atagtaacag aattgtgctg ttttctggta tccccacccc catttgaacg gcgtgttctc     120
gatgtcgcta caagtttgtt caaatgacag atgnaactna aaangctgtt actgctattg     180
atgaataaca tactactctc aaaaaaaaaa a                                    211

<210> 254
<211> 216
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(216)
<223> n = A,T,C or G

<400> 254
caccctcaac cactggtgat aagccngntg tgttnccncc atctcaagac ttgctctgca      60
atgtcggaca cctcggccaa gccttgatta tcaaggagag actggaagat aaacagaggt     120
caaaaagccc acttgattag ggagtgagga tctggtacca ctgcagctgg tgaggagaga     180
gagcaagaga tggaaaaang ggagcttacc taagaa                               216

<210> 255
<211> 278
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(278)
<223> n = A,T,C or G

<400> 255
aagacttgtc ggacgtggag gaaattgtca gcgtccgtgg ctncagcctg gaggagaagc      60
tacgtagcca gttataccag ggggacttcg tgcatgctat ggaaggcaaa gattttaact     120
atgagtaccg tacagagaga agctntcagg gtccccctgg tttttcggga caaggatgga     180
ctagggatca agatgccaga ccntgatttc acagtccgag acgtcaaact cctggtgggt     240
aagtgccaag ggccgggtag gagaagggaa gggaggct                             278

<210> 256
<211> 178
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(178)
<223> n = A,T,C or G

<400> 256
cactggacac gagctcgcat aatcagaaag gctttatcca gaggacttct acactgatga      60
tgatgaagga atgttatcga acatgggccc agcctggagc ngtgaagccg gaacccagtt     120
acacagattn agncctnatg anagtccagg tcngaaaaga gttcccgtgc cttacgct       178

<210> 257
<211> 270
<212> DNA
<213> Mus musculus
```

<220>
<221> misc_feature
<222> (1)...(270)
<223> n = A,T,C or G

<400> 257
cggcccaccg tgcgccccag actgaanaag actgncanaa actatgacca atcanngagc   60
agcatcaacg gacatctatc caatnggnac gtgctaggnc ggtacctacn gaacaagacg   120
gncggnctca cctgtnttnc tacggtggga ttgagaggta nccgcatagt gcgacactag   180
aacnanncaa aaggncgcag cacaagttac gcccactacg gggtgtatgn tgggaaaggg   240
cgcctgcgca gaggtgctct cctggatctg   270

<210> 258
<211> 261
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(261)
<223> n = A,T,C or G

<400> 258
aatccggtac gaattttnag ggctcatggc ccggccggcc gttcatcatc ttgaggcagg   60
ttccacgaga ggtttgacct cgactccaac tataggaaaa acaacgactc caaacgccgt   120
gaccgagcta ccgtcctnct ccgcgctcta ggctgaaggg cattccgacc tgtcattnta   180
ggagacatnn aaaccctatg ctgcctcaaa ctcaaacttg cagcaatcct cctgccttca   240
gcttnccccc acccaccgtg c   261

<210> 259
<211> 407
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(407)
<223> n = A,T,C or G

<400> 259
ctgcggtggc acctgggccc tggcngtctn tacntattgt ggaacnatnn ctgngcaggc   60
nntncgnggt acataacctg ngtnaattcc aatgcgcatg cngcaggtgt tcctggaggc   120
ctatggcggg atgctngaag gagccgtaca gcatngagca nngcnagngc cnttcgggnt   180
acctatngga ncatggagct ggccattcct cactgggagc cctgagaccn ccatgtangc   240
ancnncaatg gtctctacct gcggggcggg ggagaatnna ggacnagctt tgcctgcgtt   300
gganccnnaca gnataanagc agngctntgt gccattcggg ctacctctcg ggcatggagc   360
tgnccattcc tcactgggag ccctgatacc accatgtaag catcacc   407

<210> 260
<211> 196
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(196)
<223> n = A,T,C or G

<400> 260
gggttacggc catatggaca nctcaagcgc ctgctagaag cagccagttc tggtgaggcc   60
acaggggact cagcatcctg acaacagcag ttcacctttc caaaagggaa ggtaactctg   120
aagccgccat tcacatccgg acccacgtg ctcctttccc ttacaacgga gccactttcc   180
cctccaaaaa aaaaaa   196

```
<210> 261
<211> 268
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(268)
<223> n = A,T,C or G

<400> 261
actgagccca ggagactcat tggaggaagg tgtatatcca agagcaaatt gaccagaagg      60
actcttccat tactgaagct ggncatggna ctcatcagga gtgcaggttc tttgtgaatc     120
acccacgctc caggtgagat ttttaatttg tatagttgcc tataaactgc ccaagggact     180
tcctggtgat gtaactgcct ttgagtcacc cgtgtaccta taagtggcct caataaannc     240
aatggttcac caagctgaaa aaaaaaaa                                        268

<210> 262
<211> 324
<212> DNA
<213> Mus musculus

<400> 262
cttctcaccc atgaagggag ggcatgtggg gcaggaacca gagacctcct gcaggtcaag      60
tgcagacaca gagcaggtca acttcctcag ccaccctcag cacctagaga agccctagct     120
ccatgcagga cgaagagcct aactccccac ctcatgcctg tcaccaagac tggcctcttc     180
tctgtccttc caccttctta tgcaaggcag tggtgtctgc tcagccctgg gcgtactctg     240
tcctcacagg ccctgcactt tagggccctg gtgtcatgac ctgtgtgaaga agaaggttgt     300
agttggtagt ttccagattc ctgc                                           324

<210> 263
<211> 298
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(298)
<223> n = A,T,C or G

<400> 263
tgaggtatta tggctnaggt ctgtctgttc ctgancggct ggaaaactgc cgaantttgn      60
natcngtgna gcggnagtgg caggncttgn tatgngctta nccaactgtn tgntgagaag     120
ggacatgtca ccggaatana catgactgan gtccaggtcc aagngtctaa aacctatntt     180
gaacaccaca tggaaaaatt tnggtttcca ggcacccaat gtgacttttt ctccacggnc     240
gcatcgagaa gttgncagan gctgggatcc agagngagag ctatgatatt gtcatgtg      298

<210> 264
<211> 215
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(215)
<223> n = A,T,C or G

<400> 264
actgcccttt gagaataaaa tgggaggcca caaccaaagt cttttggata aagcaccaca      60
atggacaatg naaggnagnc tgccttactc tnactncttn nnaaggcaca ganctttgcc     120
attatggtaa agancctcan ttctaatctg tttctctctg ctctccttcc cgagggacag     180
aatctttacc agnntnggaa agacctccct aactc                               215
```

<210> 265
<211> 287
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(287)
<223> n = A,T,C or G

<400> 265
gctcgcattc aactgtgatg agcccatgta tgtcaagctg gnggnggcac tttntgctga   60
gcaccngatc aacctgatac aaggttgatg acagacannt aaactaccgt gaatgggnag   120
gcctctgtac antctnatcg angagggcnn accacaggca angtggttgn ttgcnngtng   180
ccntanttgg ttaangacta tggcanngan tttcaggcca nggatgtcat acgaggaata   240
ctncaagtgc nggaaataaa taaatttttg gctgaaaaag agaaaaa   287

<210> 266
<211> 170
<212> DNA
<213> Mus musculus

<400> 266
gactgagttc ctcgctgagc agtgctggat ggcggcttca tctacttgat catgctgcgg   60
cgcttcaagc agaaagccca cctgacttac aatggcaaca gtggcaacag ctcagaaccc   120
ggagagacac cgaccttgga gctgggtgac cagacttcca aaaaaaaaa   170

<210> 267
<211> 258
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(258)
<223> n = A,T,C or G

<400> 267
gactgagacg ttcctctgct ggagactggt gagcttcagg gacatgccat caaggaacta   60
aagggagcat taagagacta tgaaatgaan gggcttgtnc ctacaggcat gaccgnaaac   120
tcctgctgna nnaggccaga gactttcgtn gttntgtgaa aggaaactaa ntttaatnaa   180
atnttgagnc gnnctnnctt cttgnaacat cctgattagc ggcttgtacc tactggcaat   240
accggaaact cctgctga   258

<210> 268
<211> 337
<212> DNA
<213> Mus musculus

<400> 268
aactgaggca aacctgtacc tgggactgct ggtcatgtgt ggctttgtcc tctttgatac   60
tcagctcatt attgagaagg ctgaacacgg agataaggat tacatctggc actgcgttga   120
cctcttccta gatttcgtta ccctcttcag gaagctcatg ttgatcctgg ccttcaatga   180
gaaggacaag aagaaagaaa agaagtgacc aactggccgt cagcctttcc cagctcacct   240
tctcccccac accccccac ccctgtttct ttgcacacat cacaggtgtc gtgttctatg   300
ataatgaaag catcaggaaa gcttttgtac ttaaaag   337

<210> 269
<211> 150
<212> DNA
<213> Mus musculus

<220>

71

<221> misc_feature
<222> (1)...(150)
<223> n = A,T,C or G

<400> 269
ggagaacttt ctacatttag agctgtgcaa cagagaggag caggctgtac tcctgagagg   60
tagtgagctg ataanaagat tccagacctg tggaaacctg gatgtgaata gtatgatggc   120
agaaattttt gattaaaaag tcattgtata   150

<210> 270
<211> 119
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(119)
<223> n = A,T,C or G

<400> 270
caccttttgaa ccctacggct gntttgnaca tnttntgnat actaggtntg cccnctganc   60
ttgggcctcc tcttttttctc ttaagtcttg ctttctttcc ttnctctgcg aaatgagtt   119

<210> 271
<211> 525
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(525)
<223> n = A,T,C or G

<400> 271
tgagatttga aggatgcacc nttcggccaa ggacagcctt cttttcggaa gactcccgat   60
tcaaagtggc gacagacggc accatcacag tgaagcggca tctaaagctc cacaagctgg   120
agaccagttt cctcgtccgc gcccgggact ccagtcatag ggagctgtct accaaagtga   180
cgctgaagtc catggggcac caccatcacc ggcaccatca accgctgacc ccctctccaa   240
catggttctg accttcagtg ccaaagaaga tgcaattgcc tttgcagaaa aaaaacggat   300
ggagctatga tgtggaagag aagaaggttc cgaaacccaa gtccaagtct tatggtgcaa   360
acttttcttg gaacaaaaga acaagagtgt ctacaaaata ggttggagct ggctacatct   420
ctgcttgact gtgactgaag tgtcagctgt gcactattta tagtccatgg ataatgcacc   480
tcttaatctc ctaataaatg tgacctttaa actacaaaaa aaaaa   525

<210> 272
<211> 278
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(278)
<223> n = A,T,C or G

<400> 272
aagacagcag acccttgaag gacatgtcat tgcacccttta cgctctgnga tgaccngnca   60
tactntccct tgccctgntt ttcgagtcgn tggaacccna gnnaganaan tctatncngg   120
agnaagagga taatgcancc ccacggtgtg agtgctatnn atagattnta catcatanng   180
aaatatacta ctgcatagct acgacgttac ctanagcata cccatgacca ttaacacctg   240
ttnatgnnga cactccagng ntattatcaa ctgccatt   278

<210> 273
<211> 297

<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(297)
<223> n = A,T,C or G

<400> 273
gaactgaggc cctttgattg aatttaaaca gtctnctaga ttgattctgc ctcccaacaa   60
gaacaaactg aggaagtgat gagccacgta gccgntnacc cttanagtnt tagatgngcn   120
gatcccttca tgtatacttt acagaaaacc agttaacccg ggccgtggng ggcncncncc   180
nttttgnccc acccnnnttg aggcaaaggc aagccggntt ntttcaaagg ggggggcccc   240
ctggttccac aaagggggtt cccaggaaac cccccgggnn tttaaaaaaa aaccctt   297

<210> 274
<211> 139
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(139)
<223> n = A,T,C or G

<400> 274
acaacttaat cacatgtncg cccgccnctc accaaacctg nattgatttt nangntggag   60
caagaggaag agccttgntg tggagnngag aganntgctg aggagaccct gnccagctcn   120
tgcttactga cctgcttga   139

<210> 275
<211> 385
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(385)
<223> n = A,T,C or G

<400> 275
actgaggtgg gagagcacac ctgtacacct gggcacctgg gctcctggac acctggacac   60
ctggcacct ggacacctgg acacctggac ctatacaaac tccatacata   120
cacatatacc acagacagat gtgcaaaggg ttatgcacag tgacctggtt agttttaact   180
gtcaacttga cacagcctag agtcaactgg agagttgcct agctttnnca gagngactca   240
cngatgtctg gctngntatt caagtctcat gacacattaa ggagctttca aacagctgta   300
gncgtgnacc taangaantg gtgggnaatg ctgannagct gaagtaattg aatcagagta   360
nnnatattta tccccttggag actcc   385

<210> 276
<211> 288
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(288)
<223> n = A,T,C or G

<400> 276
acaatggatc acgttagaca acatgaatga ncaaaaaatg aatgaacaaa tgaagaaaac   60
ggcaaagaca agtggccaga aagggccggg cggaagagcc ctcgacagac tgaccctaaa   120
gcaagacgag gcaaggccag tccagaatac cagagtggaa gctccccgtg tancatacac   180

```
catgcgggat gaaagtgaga ttagccccga gactgaggaa gatggnttcc ctgacgggata        240
cctagagtgc atcatacgag ttaaatgtga atagttacaa aaaaaaaa                        288


<210> 277
<211> 180
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(180)
<223> n = A,T,C or G

<400> 277
gctgggacca gtgccaggca tgccttcaac tccagcccag acctggcaga ccacattcgc          60
tccatacatg tcgatggtca gcgtggaggg gttggttttg ccattctttt tcactctttg         120
nttggttgtt tgattgnatt atttataatt gcaaatagga tttttttct tcatgagaaa         180


<210> 278
<211> 277
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(277)
<223> n = A,T,C or G

<400> 278
ggcaaaggcc aagccgaggc aggagtggac ttcactcacc cacaggcaca gccaggcatg          60
atgatctgga tgcccngtga agagtgcat gctcttnggt ctttanctgg tggggggaagc         120
caggtcagc gtntgccctt nttctnacac ccttncccc accctagntt gacacgncac         180
caaagcttaa taccctnctt tacananggc acatnccggg gtngtacttt gggtngcntt         240
gaacaggagc caanatnngg ntcaaaaaag cttggat                                    277


<210> 279
<211> 483
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(483)
<223> n = A,T,C or G

<400> 279
ggagagacat gtggacacgt agcccctatg gcttctgcct gccagatcct ccgctgggcc          60
cttgccctg ggctgggcct cacattcaag gtcacgcatg ccttcagatc tcaagtgag          120
ctcctgtcca gtttggagag ctatgagatt gccttnccaa ctngagtgga ccacaacggg         180
gcaatgctgg ccttctctcc acctgccttc cggaggcagn gtcggngtgc agggctaca         240
actgagtccc gnctattcta caaggtggcc gcacccaagc actcacttcc tgctgaacct         300
gaccccgcan cccccgtct cctggcaggg cacgtctcgg gaggaatact gggacacggg         360
aaggcctggc ttggcagaag gctgcccggg cccactgnct atacgctggc caccttgcag         420
ggccaggctg ggaagctccc atgtggccgn cnagcancct gtgggggggcc tggtgagctg         480
aag                                                                         483


<210> 280
<211> 241
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature


                                   74
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<222> (1)...(241)
<223> n = A,T,C or G

<400> 280
tgcccaccag taatggaact caccnaagna tacagncngt cctctcttgn tcatggccan      60
gnngcaagan ccaaggncaa gcctgcatgn canatgccgg tgttgcnnaa accnancngt     120
gcctngagga ntgtcctacg ngcatnangc tgagagcaaa gagaaccgaa agggactggc     180
catgcacccc ggggtcgtca aaacaattan gagagggcga taaatccttg aaaaaaaaaa     240
a                                                                     241


<210> 281
<211> 425
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(425)
<223> n = A,T,C or G

<400> 281
tgagagagca ttaactatgc ccccagctc ctcggggcca ccctggaggg gagactcaca       60
caatctacct tcacgctgga gcaacccctg ggccaattca agaacgtcaa cctctctgac     120
ccagatccca tctgtctagg ggtggctcac agtaacgagt gaaattcctg gcgatgagtg     180
ccgaggggacc cgtggctgag acactgtggt ccgaggagat ctacctgcag caagcccaga    240
cattccgaga agctccaggg tcccagggna agggcactgn ggncatnatt gccttcttgt      300
caatcctact gggcattctg cttgngngncn ttctctgtact ggtcatattc cgcttgcatg    360
annaacttnn nggnttcagn ccacaaggan caagggggg atgctgcact attatccgcc       420
ccaca                                                                 425


<210> 282
<211> 267
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(267)
<223> n = A,T,C or G

<400> 282
actgagatgc cttattggag gaattggaac gctgcacctt tcaggacagt gaggnatatt       60
caaatccagt ttcttgtcan ngggntnngn aatccacaga ggagagcaag attccccaaa     120
ctccaaaagc cttgtcatcg cagggtaaca caagtccctt gaaggtnaca tttgaactat      180
tgtagtgtng nagacaatca agngngacaa catttctaaa aattgnattc cacataggnn      240
tatattttgn aaattataaa aaaaaaa                                         267


<210> 283
<211> 328
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(328)
<223> n = A,T,C or G

<400> 283
tgacagtaag gaacccgaga ctccatagaa nagcccaccg caggctntan atcctgcagt       60
cagaggaaga aggtgggact gagtcccctg gaactgagtc gctcanagtg gggccttcag      120
tanggnctcc tatgtcagg agaggggcct gannatggtc cagncagcac antanntgan       180
gctgccactt taccctgghg aactgacccc catcctagcg ccccacttcc ggatccccg      240
ggctggcgag atattgaacc aganccccta aagtcagagg cacctactaa ggtcggaggn      300
```

```
agccattcaa agtaggatgc caaccctg                                          328

<210> 284
<211> 274
<212> DNA
<213> Mus musculus

<400> 284
tgaagccctg acaagcatgg aacttacctt ggatatggag ctggtatatc tcaaggagaa       60
cttgccatga ccctcctgcc tctgccttct gagtacacaa atgacgatgg tctcgcttca      120
cgacacccag tcagctttct ctgccagaag cattcggacc aggaggagtg ggttattttc      180
ccaggagatg ttgcattcct gattgaacat gctggccttg agataagggc ggccccgaga      240
taacagtttt taaaaaattc ataaaaagga tgga                                  274

<210> 285
<211> 297
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(297)
<223> n = A,T,C or G

<400> 285
cagcggtcaa gatgtcgtcn cntcatccgc acaggganctt nccggacnng acgggactac       60
acatgccgtc cacctggtct cctgtccgtc gttcacanat acnttcccca cngangagca      120
cacacngtag acngcnggac ngcntgtggt cannntgtct gtcggcgtcc cnacggaacg      180
ggattggaag gacggactcc acaaggtgcg ctgtgtcacc gaggccgcca ggatggagnc      240
actctnacga ttctcaacag gggctagacc gcggtacaga aattgtcctc ctcaata        297

<210> 286
<211> 449
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(449)
<223> n = A,T,C or G

<400> 286
tgaggcaggt gcagtgaagg actatattaa gatgctgctt cagaacgact cccttaaatt       60
tctggtcttt gcgcaccatt taagtatgct ccaggcttgc acagaagcag tcatcgaaag      120
caagtcgt tacatcagga tagatggaag ngttccatct tcagaaagaa ttcatctggt      180
taatcaattt cagaaggacc ccgatactcg tgtggctatc ctgagcattc aggctgctgg      240
ccagggttta acgtttactg ctgcgagtca cgttgtcttt gctgagttgt actgggaccc      300
tggacatatc aaacaagcag aagaccgagc tcaccgaatc ggacagngca gttctgngaa      360
tattcactac cttattgcaa atggnactct ggacagccta atgngggcaa tgctgaatcg      420
aaaggctcag gncacaggga gcacactga                                       449

<210> 287
<211> 337
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(337)
<223> n = A,T,C or G

<400> 287
ggaccacatg gcatctgtgt ttcgaagtga ggagatgtgt ttatcccaag tgtttctcca       60
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```
ggtggaggct gcgtattgct gtgtagctga gctgggagag cttggcttgg ttcagttcaa        120
agatctaaat gcaaatgtga acagcttcca gaggaagttt gtgaatgaag tccgaaggtg        180
tgagtcactg gagagaatcc tgcgtttct ggaagatgag atgcngaacg agattttaat        240
ccaagtgcct gagaaggatg ctgaagaccc ctctccctcg ggaaatggat caccctggag        300
acgactctag agaagtttgc aaggagagcc tgcagga                                  337


<210> 288
<211> 180
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(180)
<223> n = A,T,C or G

<400> 288
ccccagactg aaggactgtg agcnngagag ccacatcatc tggacactcc agggctacat         60
agcggccctc tanancgcag gaagctctca ngagttcaaa gacaggctgt gctacntngg        120
aggatctgag atgactgggc ttcttgagac tttggcttta aaataaatta gtagttactt        180


<210> 289
<211> 166
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(166)
<223> n = A,T,C or G

<400> 289
tacagtgtgg gccaaacact aatatgcata aatngangtn nattatgngg ntggtctggg         60
catcaggttt ancnttcatc aggagccca ggctcnacct aaccactncc ttataccttc        120
cctcttccag gaaataaact tcatttctta atgtcaaaaa aaaaaa                        166


<210> 290
<211> 162
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(162)
<223> n = A,T,C or G

<400> 290
gaagtaccgt gtagctgaag atgaccttga acttctaatc ctggctctgc tccccatttc         60
tgggattata ggcttgggcc actacattcc attaagagag naggggattg aacctactac        120
tnnagannnn ctnnaanntc ctttgaagac agggctctc tg                            162


<210> 291
<211> 196
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(196)
<223> n = A,T,C or G

<400> 291
tctgggtgta ttttatataa ccaaacatgt catggtcctt cacagcatac aaatagtttt         60
```

```
gacgttttaa ataaaagtat ccagcaaaga caaaggactc ncannncnct acgctggtgc      120
nngantctcc acctggctca aagtgaccac gcctgnctnt ttnatcgngn gtgctctgca      180
cttcttcccc accccc                                                       196


<210> 292
<211> 131
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(131)
<223> n = A,T,C or G

<400> 292
tatacccacg tgagtacctg aagnggaagg aagntaagcn cncntgccct gagcnagatg       60
ntngaganta tgaccnacaa ccgnaacgtg atcactggag cccatttacc cctgnggcca      120
gtccacatgg t                                                            131


<210> 293
<211> 367
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(367)
<223> n = A,T,C or G

<400> 293
agagctcccc cgccagaaga catgaanaan catancgact cggttaaggg aaagcgccga       60
gatgatgggc tttctgctgc cgccccgcaag canagggact cggagatcat gcagcagaan     120
cagaaaaagg caaacnagaa gaaggaggaa cccaagtagc cttgtggctt cgtgtccaac      180
cctcttgccc tccggctgtg tgcctgnagc cagtcccacc atgctcgagt ttcttcctgt      240
agtgctcaca ggtcccagca ccgatggcat tccctttgcc ctgagtctgc agcgggtcc      300
ttttgtgctt ccttcccctc aggtagcctc tctccctctg ggccactcct gggggggtgag     360
gggggtt                                                                367


<210> 294
<211> 422
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(422)
<223> n = A,T,C or G

<400> 294
gactgagaac agatacaact tcctggttcc cctcctgtaa aatcgtggct gttgaatggc       60
ttagagttcc gaagatgtgc gagcacacga tacccaccca ggccaccagt tctgttccta     120
ggagtgtgga tggtacctaa tcctttcaca gccttctggc tgacatttttc tacacagtga     180
atgggagttg ctttttttt ccatgctgct ttttctacgt ctgagtttct tggacacttt      240
ccagctgcac accaaaacag cttccttgtt tgtctanacc gtcggtaatt gactcaagcc      300
gtcccccttg gaagccatgc accggacttt ccttgcattg cgtataanag tgcttgcgta      360
gattcctaga agtggatgaa ccagccaagc agctatgtnc ctggngcgat gttgatagct      420
gt                                                                      422


<210> 295
<211> 105
<212> DNA
<213> Mus musculus
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<220>
<221> misc_feature
<222> (1)...(105)
<223> n = A,T,C or G

<400> 295
attttcctga aagtaatatc ntcncagaga agcttccctg gnacctgang tacacctncc      60
tgcatgannt ccccagnacc agcagttata accaggacta tactg                     105


<210> 296
<211> 178
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(178)
<223> n = A,T,C or G

<400> 296
cctgggacat gttttctgga agagcnatcn aacgantgga acaaagaatg atnaccgtnt      60
gctgcaggct gtggaaaacg nagangcatg anaangngac ctcactgctg nacaanaaag     120
ggtccagccg ccacgaagca tgacaccgag ggcatnnacc agcgtaggag agaatttt       178


<210> 297
<211> 114
<212> DNA
<213> Mus musculus

<400> 297
actgagaggc agatctgaca aattctggca gttctccctc tgaggatgat gccctgcctt      60
caggttctcc ctggagaaag aagctcagaa agaagtgtga gaaagaagaa aaaa           114


<210> 298
<211> 274
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(274)
<223> n = A,T,C or G

<400> 298
cgtgggaagg tttcccagcc gagnccaggg acctgcaagc ctgtctactt gctcctggag      60
ctggaggaca aggaacagca ccagggtgtc cagcccgtgg acggncaggg aagtctcgtg     120
agcagcctgg ccgttggtgc cctctattgt ganggaggag agcancgagg aggttnttgc     180
catagctgct acttgtgcta aagaactcgg acatggancct gtccctgctg atcttgggag     240
aagtgcgcac cccagagccc ccagaatctc tcaa                                 274


<210> 299
<211> 244
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(244)
<223> n = A,T,C or G

<400> 299
gatccagagg atgataaaga aatgatagca gctccagana taccaactga ttttaatcta      60
ctgcaggagt cagagacaca ctttttcttct gacacagatt ttgaaancat ntgaaggana     120
```

```
aaatcanata ncaaggcaca ggcaaaactt tnttttttaa ggcnggggggg ggtccagcag      180
aaaagggtna aagaggaaat ggtaggagga aaacctcctt ctnggctcac acccgaatga      240
acgg                                                                   244


<210> 300
<211> 130
<212> DNA
<213> Mus musculus

<400> 300
agaggcaaag aatgttgctc ctacaaagga actctcctga cagaagtcca cagaggacag       60
atggatgggg atgatttcca cactagttcc taactttaaa taaaaccaag cctgcagccg      120
tgtaataata                                                             130


<210> 301
<211> 122
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(122)
<223> n = A,T,C or G

<400> 301
catactaaca gaggctgggg gggattntgt cttggntntc attangacca nngcgnccct       60
attgatctnt tcatggngga aattgtggag atgaggcaca agtcngaaac ggacacacag      120
gc                                                                     122


<210> 302
<211> 131
<212> DNA
<213> Mus musculus

<400> 302
gtgtcgtcaa caggaaagtg ttgtctcaga agaggagcta agatgggaag tatgggctag       60
gacgggaagt gcaggtctac tacaggacca ggtgaaaaat aaagtcactg aaacaattca      120
aagaaaaaaa a                                                           131


<210> 303
<211> 164
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(164)
<223> n = A,T,C or G

<400> 303
gatgtaccct gctaccacca gggccttgct tcccgtgtag ttgccaaaag aaaaatttnc       60
gctgccccat ccctcctgct gagaagnctt cctcctttgc tngggcattt ccgctgcccc      120
attgctcctg ttgaaaagga cttncccttt tgcttgggca ttta                      164


<210> 304
<211> 536
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(536)
<223> n = A,T,C or G
```

<400> 304
```
gaactgaggt tcttcaggag atgtagctga aacggttggt gaccaatcag tcctgtgtga        60
gntctgatnt atanggncca tgtgcagcnn ctacaggncn cgggnaacac ntantgacac       120
tganctttnc agcacgngng agaggnctgc nttcntggnc ncntcntatn ccnantcctc       180
nttccaagag cgcaccctnac aatcctgcna ccagtccttc ngtggcanng tctganagca       240
tgcacaggtc aatgacttct tgcagacaca ggaaatccac gcactcaant ccagctngag       300
atgttnctcg gagctnttca nagtcggnac tgcaacacaa aggagcangc aggcttnctc       360
cagactncta tntaggattt gcccaggaag taagcatcng tcagactctg nacattcctg       420
ntagangtnc catgtacttg gcagcattcg agtnttccta cgttnaaaga gaaattcttt       480
aanaagaatt tccagaagct gggcgtggng gacacgcctt taatcccagc actcgg          536
```

<210> 305
<211> 324
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(324)
<223> n = A,T,C or G

<400> 305
```
actgagtgac accagggcaa aggccataan ctccttncat gctgncttcc tgatacacaa        60
agcatcacaa acctctcgan ttacctctgc cacccgccaa ctccagcagc cctcttcctg       120
tccctgaat gccatgcttg ccagcaaccc ctggttcaca tcngngactt aagggatccg       180
atgaagatat gtggaccagg atgctctgtc tttgagcagc ctactctaat ttcttttttgg      240
atgctccctt tagttcctc gaactaagct gcttcttttgc taagtacaca tctgtctaaat      300
aaacttcagc ttaaaaagaa aaaa                                             324
```

<210> 306
<211> 164
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(164)
<223> n = A,T,C or G

<400> 306
```
gccacctggc ttctctttct agaggaccna ggttctatnc ccagtnntga cattggaagn        60
tcanangagn agtgntnctn cgtnctaaat ctgaagtnct ctctgacctc tttgggnact       120
gcacacacat ggncaaaaca cctagatgca taaaataaaa ataa                       164
```

<210> 307
<211> 481
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(481)
<223> n = A,T,C or G

<400> 307
```
tgagaagttta agaagctttt attcatgtgc atgtcataga agatgaattc atcctcttct        60
actatgaatg aagaacctga tgctctcatca gtagttaacc agctacggga tttagcagca       120
gatccactaa atagaagagc catcgtccag gatcacgggat gtttgcctgg ccttatttta       180
tttatggacc atccaaaccc tcctgtcgnt cactcagctt tgcttgcgct acgctacttg       240
gctgaatgcc gtgcgaatag agaaaaagatg aagggagagc tgggatgat gctgagcttg        300
cagaatgtca tccagaagac tacaactcca ggagaaacaa aacttctggc ctcagaaatc       360
tatgcatcc ttcaatcctc caatttggct gatggtgata gtttaatga aatgaatttc        420
gcgtagaagg aaagctcagt ttttttttttgg gaactacaaa caaacgggcc aaaacagtag     480
```

t

<210> 308
<211> 356
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(356)
<223> n = A,T,C or G

<400> 308
tcttgtggaa ctcttaaagg ctcgtgcagn anagcatggc ntggtnccnt atngganttc   60
tttacnatgt cgngtgcctg ttgatccacc tgaaggagta tggccaccag gttcctgaaa   120
gggggaaaga tgaaatggtt caatctacct gagggttaaa acgtcacttc ttgatggaac   180
agaggataca acaccagggn nnnatgtncn ctncttgnan agttnctgac tncntggacn   240
gcgacgctgg nntgacncac atagagatgt tnctgctcng ntnnacgncc ttgactgnct   300
aacncccggc tggaattata ttatcacaan gaggnacctc tacctcaaag actata   356

<210> 309
<211> 188
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(188)
<223> n = A,T,C or G

<400> 309
acttgaacat acccaagatc tctttctact cattgcaact tctgaatcga tcttctggtc   60
taagaaaaag gatcaagatt ctgtgatnng aggagctgaa naacgttata annctacatg   120
tgnctgtgtt tttctgtttt cttgnaaggt acaattaatt tcttctctgg tttttctatt   180
ataaacca   188

<210> 310
<211> 266
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(266)
<223> n = A,T,C or G

<400> 310
caaagcatgg gtttgccaga tgtgcaccac aaaggctgtg gaggggtttg aagcatgagg   60
ttggcatgat agcgacctga cagtgggaac ctancatgct gaatggagac ngtttcagga   120
gctccaggcc ananagcacnc cacnagatga aataggtcng gnctctttacc ntcagtgcat   180
gntnagncag gcacaancgc nggagcgagc cggctctatt ttttagatac ttncttcaat   240
agagaccct gccttaaaaa aaaaaa   266

<210> 311
<211> 179
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(179)
<223> n = A,T,C or G

```
<400> 311
gtgggttgtg acactcaaga agcctaccag agagngcctg ggtatgaacc ttgatggtat      60
caaagagcct gggtcnggtg gtananagcg gctgncncaa gngaggtcgn agcatctcca     120
agnnactatt ggaggncact gtacccacct ggctttgaac aaacggctgc cgggggaag      179


<210> 312
<211> 129
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(129)
<223> n = A,T,C or G

<400> 312
ttaacctgat gatggangag atgatcttna ccttgctgac acacaccngt ancttnantg      60
acctgnagga ctgtgtgaccaa ntccacgtgn atgatgtctc atccngatga caatggtcag     120
gatttaagc                                                             129


<210> 313
<211> 263
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(263)
<223> n = A,T,C or G

<400> 313
tctctatctc cgccgtggtg atgtcctatc tgcagaatcc tcagcccatg acggcctccc      60
tggtgatgcc acctaggagg gttggatcct ggacctcaggc ccaccttctc tctggcctag     120
ccttTgctg cctccgccct ccctcagctg ctgtcctaaa ctttcctgag tgtggtctct     180
gggctcccan ctgaatggaa ggaagntggc cctttctttg gggccctgct tctgctttga     240
caaagagata aacctgcaga ctt                                              263


<210> 314
<211> 436
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(436)
<223> n = A,T,C or G

<400> 314
catgtgatga gccagaagct atcnncatga ggaagatagg cctatcatca tggaaggagc      60
caaccagcca gagacggaga gcagaagcca gtagggctg agcatgaaga ttcagttcct     120
ggacactaag actgttgtta tatccagctc agacctgcga gccacaggcc tggcctccag     180
tattatgatg gagtacttgg gccttacctg gnccagccct tggttctggg ttctgcagac     240
tgctgtttga cctctggctt tgagacatgc ccaaagaagg gctggctgtt cttcatggcg     300
tgctaagcca gtgcctcaga actcaggagg ccagcctggg gtccanaaga tgaccacctt     360
accttaggac agccacttgg actcagcttg tggaggggggg tcttgctggg ctggagtnct     420
gtgcctgggg gggtct                                                      436


<210> 315
<211> 196
<212> DNA
<213> Mus musculus

<220>
```

<221> misc_feature
<222> (1)...(196)
<223> n = A,T,C or G

<400> 315
aagacaagag gagagatgga gaagtgccat gactcagggg agaaggatgg gacgtaggag   60
cttcaggagg gaaagccaac cagccatgtg agaattcgga tagctcctgc aagggcacac   120
tgtgcagtgc atctggctga gaaccaaagc gatgtancce aaattaccag tacaagcttc   180
tgagatcctg gaaaaa   196

<210> 316
<211> 237
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(237)
<223> n = A,T,C or G

<400> 316
ctgtgaaagt gatgacnatg acagaacgtg ncacgcnagc tctagtgact ggactccgcg   60
gccgcggata ggtccatata cttttgttca gcaacatctc atgattggca ccgatcctcg   120
aacaattctt aaagatttat taccagaaac aattcctcca cctgagctgg atgatatgac   180
gctgggggag attgttatta atatcctttc agaaccacca aagcggaaaa aaaaaaa   237

<210> 317
<211> 142
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(142)
<223> n = A,T,C or G

<400> 317
atacatgaga aaacanggaa gagaaaagag atgcactaac ctttgaatat accaacatat   60
tggcagagat caaaggaagt taacagtgtg tacccaaaga accatgccgt tttaatgaac   120
aanactgcct atgaataaaa aa   142

<210> 318
<211> 104
<212> DNA
<213> Mus musculus

<400> 318
tgaggctttg tcaccctctg cagacctcat ccgccagcga gagatgaaat gggtggaaat   60
gaattattca attaaaaagt ttactttaga ccacaaaaaa aaaa   104

<210> 319
<211> 125
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(125)
<223> n = A,T,C or G

<400> 319
agttgtgggc acgtgcctct tccagtttga cagcaagtgt cttttacctt ctcagccacc   60
tgagaaccca gaagagttgg ttttcaaagc tgagctctga ctaataatna aactagaaac   120

84

aacaa

<210> 320
<211> 231
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(231)
<223> n = A,T,C or G

<400> 320
gtactctgag ccctgatcan naaagagctt tctgaaagac ctatagngca tggctgcgng   60
gtgtncacag ggtttccctg tgtattctat nccttggana ntggagantg acnctcactg   120
cctgtggacg gatcatgtnc tnggggcnct ctgaggacta nnagnanccn tcactttgct   180
ngnctgccac nggaattcag ngttgtggca natggagatc ccttggggcc c   231

<210> 321
<211> 266
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(266)
<223> n = A,T,C or G

<400> 321
gactgagttc cggactccgg ggttctgatg ggctgctctg aactccgtnt gaccaggctc   60
acacatcana gatatgcagg canaaggatg tatagangga ggaggaggag gaagaggagg   120
aaatgnntng tctgnaccnc ttnatctcan tatcctatct cngccnttcc tatttntnct   180
acntagtant ncttcntcnt cgccctgtgg tnctgcgctc ttcattcttg ctttcctgng   240
ctgntatggt gctcactctg agaaca   266

<210> 322
<211> 122
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(122)
<223> n = A,T,C or G

<400> 322
cttctcaagc tctagatgac tcatctancn ngacacatgc nggcctcatt cgggtaagaa   60
gccatttnaa tgtcgatcnn gtgcanttat gtggcctcta atnancgtga ggtgacccag   120
ac   122

<210> 323
<211> 238
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(238)
<223> n = A,T,C or G

<400> 323
tcgcaggtga agccttctgg aacgcgtaca cagcaggncg tgagggcngt gcatncangn   60
taccacactc tncggnctnt angncctcat agggctcaga caaggctcct gcananaaca   120

```
caggccangc ccncctgnat ctggctgccc tttcactngt tgnatgcgga agccggctgc      180
cncantcctt ctcccacagt acagnagnac tcncngccac agtcacggtt tcgggcgc       238


<210> 324
<211> 110
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(110)
<223> n = A,T,C or G

<400> 324
gtcaatgcgt gttcctgaac aagaagatgt ccactgtccc ncaggaaagc caggatgggc      60
aagaggaaga agtcactgtt gaagatgttg gacagagaga gtcagacgat                110


<210> 325
<211> 181
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(181)
<223> n = A,T,C or G

<400> 325
ccgagggtgt tcgtgttgat ttacagttat ggagatttga ctgaccatat ngagacccna      60
aaatgggaaa atattgttta gaatgaacat ggaactgttc atggaacaaa aatgaaagat     120
gtcaataccc gngaaaagga taaacatgta gtaaagngag gatatcatga aaaaataaaa     180
a                                                                    181


<210> 326
<211> 174
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(174)
<223> n = A,T,C or G

<400> 326
tgctctatag aacctttcta aacaggtcca ctaccccctt ctgcatccct tcttgtatcc      60
tttctctcct actacctctg gtgagtagta gggctaaaag gaaagttaaa gcttttaaga     120
accatcaggg gngngctttc atgaggaaaa tacctaatat taaaacagaa aaaa           174


<210> 327
<211> 179
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(179)
<223> n = A,T,C or G

<400> 327
acctggcctc atacaaaccc tgnagatggg ttnttnaccc gagangtttg tngatttcan      60
ccaatgatgn tcatgggaa atgaacatan acagacctna tnttctaaca gaagcccagt      120
gnancacacc cttgatagng tnctgaacat gactgcagat ggttctgata aaaaaaaaaa     179
```

```
<210> 328
<211> 343
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(343)
<223> n = A,T,C or G

<400> 328
gactgagagc cgcatcggct gtcttgtgga agagtcggtc acggtcacat ctgggagcag      60
cactgtcgtt cctgtctcgn atgtgctcct gtgtcacatg tcacctgtca tcttcagaac     120
ctggaagtta tgacttcgag aagccaaggc ctgctcagnc cacatggnan ccctaaagan     180
agcgganaaa ctgactgcac tgnacngngn ngggcttggc cgaggatgcn ctagctttca     240
ttcgncgctg anacccgcan agttgnatta gcttctngca aagctcaaga actgtacacc     300
accaccctag ngcatgcang aggcccttgc tatatgcaga ata                       343

<210> 329
<211> 107
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(107)
<223> n = A,T,C or G

<400> 329
agaatcttct caggtcccnt ctggactntt cggccnaagg atggactatg gnnnaagatg       60
ccggaccctg atttcacagn cctgagacgt naaactcctg gtgggga                    107

<210> 330
<211> 255
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(255)
<223> n = A,T,C or G

<400> 330
agaagtcctt tttacccaat actttangtc tgtctaccaa atcatcacag gtaagaatgt       60
gtcataatga aagccactat tttgcataca taaagaagaa nccacaaggc agaactgnag      120
nnangactct gtggctnaag gggcttgccc ctgagcctat gatctgagtt tagtccctgg      180
gacttgaaca gtggnaaaga attgnttcta tcaagttgtc ctttgacctc tacacgtgca      240
cagtggcaca tgcac                                                       255

<210> 331
<211> 459
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(459)
<223> n = A,T,C or G

<400> 331
ctccacacag agactgaang ccaggctgcg gtggatggac cangatgctg nggnttgacc       60
anactgctgc ggatggacca ngctgctgcg nntggaccag gctgctgcgg ttggaccagg      120
ctgctgcggg tggaccaggc tgctgcgggt ggaccaggct gctgcgggtg ggcctcgctg      180
```

87

```
cagttgctgc ggatggatct gatgcctgtt aagcatcact tctccagtgt gagcccgcca      240
cctccatttc cgtcacgtgt gcccatcttt ttcagtctaa tgaactccaa ccatcagcgc      300
aacttaagtt cggctgtctg ttcgtgcatg cttaatatta aaaatgtact aacagtgtgg      360
ctgagaaatc aaattatgca cataaatatg ctggcatagc anaggcggcg gcagaagctg      420
aacttagcag agctgacgcc agttcacatt tgcaaatcg                             459


<210> 332
<211> 106
<212> DNA
<213> Mus musculus

<400> 332
gaagtaccgt gtagctgaag atgaccttga acttctaatc ctggctctgc tccccatttc       60
tgggattata ggcttgggcc actacattcc atttgtgagt tgggga                     106


<210> 333
<211> 213
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(213)
<223> n = A,T,C or G

<400> 333
aaagcgtcgt ctaaaagaac caaataaaca aatagaaaag atgccaggtt agcctcagtg       60
gttaagccac ctaacttcac aatacccagt atccacatgg ttaaaagaga agattgacat      120
ctgagagctg tcctctggcc tccatggtga tcagtgagng gcacgtgagc catctnccct      180
ctactngcnt gtgagngtct gcccttacac taa                                  213


<210> 334
<211> 464
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(464)
<223> n = A,T,C or G

<400> 334
ggccatcccc ctcaactata aaaatatatg aatcggaatt gcattttccc tggacaaaac       60
cctgagcaga aaccagaatg ctacacttca tccagaaagt ttctggagca tcttcaaaga      120
tgctgaagaa cccttttaca gngagacttg gagctggcag aatagacata ctttctctca      180
agacatgtct actgnagaac ttttcctctt tgcctccaag aacttggctt tccccatcat      240
ttcaagtgtg tatgaggaag atacaatgct accatgtgtc accatgcaac tttaaaaagc      300
anaaggcagt ccttcctcca aagaaacnga agcaccatca cttacctact cgatagccca      360
aagccagctt tatatataac tctggcgggg ttaatcccct ttactgctcc cccacttctc      420
atggtaataa caaagtctta tatccccgtc ctagctttca ctca                      464


<210> 335
<211> 193
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(193)
<223> n = A,T,C or G

<400> 335
aaggcatctg atacacanat gctctcggta tggcgttatc atcctcggca ggaanagggc       60
```

```
nctccatgcc ntgctcctnc cactgattat agatctctgc gatggaatcc tgaggaattt     120
tcacaaacac ttcttttgca ncttcatgtt tctttaatgc tatgaaaaaa attcantata     180
tataaacttc tgg                                                        193


<210> 336
<211> 408
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(408)
<223> n = A,T,C or G

<400> 336
catggatggg tagctgagat aaaggaaaga caaaggctgg ggctgnggng cttgttgcct      60
gacgccctgn gagctgaact ctgggactgc tgttgcctat cccaggaagt gctgcttatt     120
tgagggtgnc tggtggaaat gggtaatctc cgaggatgtc tgcagcctgc ttgttgtgag     180
ctgtgactgg ggaaccccaa ggcagaggca ggggtcaggc agctgagaag cagcagaaga     240
acacacttag attcaccttc tgttcttaca atagttcaaa tatagaatcg aagtgaaatc     300
tcattggatt atgcctctct aatgaaaagc gagctgtttg actatacgga aaatgtgctg     360
acattaattg cttctgttta ttaaaggtga tttgcaaatt aaaaaaaa                  408


<210> 337
<211> 485
<212> DNA
<213> Mus musculus

<400> 337
gagtccctgg ctccatgccc caaacgcatc ctggcacggg aacctcagag ctgtgaagtg      60
gatggacatg gaagcgaagc atggaggctg ccatggtcac tacgtccatg cgatttgtat     120
ctatggaaac ggagacttgc agtggctgat taattcgcaa agcctgtttg ctaacaaatt     180
tgaactcaac acatacctc ttaccgtgga atgctggaca ctgaggcttc gagaaagaac      240
actcaaccag agtgagatcg ccatacagcc gagctggtat ttctgacccg cagcagctcc     300
ggcctaaatg gaaattgaag acgtaaagaa gagctttctt ttccaagaga ctctggtctt     360
ggctatgctg aagactttt taaaaaatgg ttttcaggga accgtgagga tctggcaaca     420
tggctctgct tgcaatatcc actgagcact gtaatacatt tgacaggatg gctgaaaaaa     480
aaaaa                                                                485


<210> 338
<211> 338
<212> DNA
<213> Mus musculus

<400> 338
gaagagctca gcacacagac tcaaaagtac aaggatgaaa tgtcacagct caactgcagg      60
gtccttcagc tggaaggaga gccttctggt ctccatacac agaaggaaga gaaccacggt     120
gctatccagg tgttaatgaa gaagctggag gaggcagggt gccgggagga gcagcagggt     180
gatcaaatcc aaaacctgaa aattgaactt gaacgtgtga atgaggaatg ccagtactta     240
agactgtcac aggcagagct gacagaaagc cttgaagaaa gtcgaagcca gctctacagt     300
gtccagctga ggctggaggc agcacagtcc cagcatgg                            338


<210> 339
<211> 370
<212> DNA
<213> Mus musculus

<400> 339
tgagatcctt ctccgggggat ttcggtttgg gacgaaagcc acagtgactg ggcagtttca      60
gggatgagca aagtcagcct cgagcctgtt ccatcaaggc accaagcccg gcgacaccaa     120
cgctcaggag gtttttagtg ttcatggctg ccttgtggat ttgttctttt acagtcattt     180
ctttattgag aaagggcaca caccaaggtt agaggccact tgccagagct gttcttctcc     240
tgccctgtag gttccaggga ttgaactcgg gcgagcaggc aagtgggatt taccctccga     300
```

89

```
atagctgtca gcccaaagtt gttatttaat gaaatctgac ccgaggtatt agaaatcgga          360
aaaaaaaaaa                                                                   370

<210> 340
<211> 233
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(233)
<223> n = A,T,C or G

<400> 340
gccttatgag tacgtnccna cncacacgcg ctgaacctga atcaccacaa cctcgccctt           60
ggatgacagc cnaanncttt ngcattntgn ctangattnc ncgangcacg cctgtctaat          120
agccnagcct gttgatctaa gagagcatnn ntctccnana ctcagctcng naaggagagn          180
tgggcgaatg gatccaatct gagatagtgc tnctgtgcgg catgcatggg aac                 233

<210> 341
<211> 230
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(230)
<223> n = A,T,C or G

<400> 341
ataggaaatg aagcgccttg agccacatca tggtacagcc aaacccagaa gccaggctgc           60
gaaggttaaa gccacagagg cagtgaggag cacacgcctc tggtggaccc tcagatgcct          120
cgcagcgaca gtcatcctac acggtgtgta tttagacagt gccacctntg acttaagtnc          180
agttttcaca gacccgagat aaggcggggg ggggggggg tcccctgccc                      230

<210> 342
<211> 122
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(122)
<223> n = A,T,C or G

<400> 342
aagcctggcc tctcccatta cagagagggg gaagatggat atttggggc cttacgattg            60
tcatnccta ccagctgtca cttccagacc accccccact ccaaacttgg ctttaaactt          120
tt                                                                         122

<210> 343
<211> 274
<212> DNA
<213> Mus musculus

<400> 343
actactttgt ggcccaccct gtccttgaac tcagagattt acctgcctct ccagcactga           60
gaagattcag gaattctgat accggcttcc ctggctagaa accttttaag agtactgtta          120
tatttgttac tgggaaatc caccttccat aaccctgctg ggacataact attaagaaga          180
cgtttgctac tgacttcgtt cttccccttgt tgattgtgcg gtgttctttt tttgcaataa         240
accattcact agtcctccta ggcaaaaaaa aaaa                                      274

<210> 344
```

```
<211> 210
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(210)
<223> n = A,T,C or G

<400> 344
gcagttttgt tctttcaaaa taagaaccaa gacccagggc ttctgcagaa angaatacag      60
tctgactggt ctgtgcaatc ggtcgtcctg tcccctggca aatagtcagt atgctaccat     120
taaagaagag aaaggtacgg gagctacacg acaatttata aacggatgtc cccagcctct     180
gtaaataata ataataaagc tgtctaactt                                      210


<210> 345
<211> 143
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(143)
<223> n = A,T,C or G

<400> 345
ggccaatcca cgtcttctca actcctcatc tgctctcaca tcacatccaa tccaactggc      60
aanggngntn ctgctaccan ngcagaacag ncccatccca tcaccccacc cacactaaaa     120
gaaagnactt acagaaatac caa                                             143


<210> 346
<211> 270
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(270)
<223> n = A,T,C or G

<400> 346
gagaagcctg actcctagta gannctgagn cttctgcact atnntccaat ngtgnacaaa      60
nntgntctnt ttgnggaaca naaagaaatc cgatccctct gngnagngna ttgggaanga     120
atncgattcc taaatgagan gctcgagggt gaggcacctg tttctgaact ctgcggttga     180
gcangganga cgaggaagtt ccagcatggc ctcgggggat gttggctaag ggacagagcc     240
caaagantnc ttcacagaga ccacatattt                                      270


<210> 347
<211> 467
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(467)
<223> n = A,T,C or G

<400> 347
tgagggtctc tcccanacct gagtggaggc anaaccccn tgggnagttt tgttgcttgc      60
tgatccactt ncggtctngg atgctgtgga caggtctgat gaagacaggt cccgtgtggg     120
ccgggaagac tcagaggtta gataggcgan aagcacgagc gattacctga aaaatgctgt     180
gtgtcatcatt atcgcccana nagtgctttg gcgtggnngc ggatcccatt gtgagtgatg     240
tcttctccgc tgatgcagtt ctcatggtct ttgtncactg ggacaccaaa naaggcaccc    300
```

```
tggacagtct ttcctggcag caaattgtan atctgtgcat tggagganaa caaagggctg      360
gacctggagg caagatgcag aggctaacca taaaaccogn gaggcattct tcgaagcctg      420
tacatgagga cncttctctg gaaacacaaa ggcattttaa aagacat                   467


<210> 348
<211> 344
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(344)
<223> n = A,T,C or G

<400> 348
gcacgttttg tgccctnccc gcctncaaat tgcctcagtt acaaatcatt agggcaggct       60
tggtgagcaa gactggcaag cacattttaa ggtcccgtgc tgtgggggttg atccatctca      120
acttgagtca taagagtcag aagnggatgt gagagaaaga gacacacact agagacagan      180
agccaaagag ggcagagaga cttgacttta agagactcct gnactgacaa ctccatgcag      240
ttnggaacca gaacaactgc ggctgaacca nggttcatgg ggacatggca aaacgctgac      300
actaacctct tattcagaat gtcccaacag gccattcgct gtac                      344


<210> 349
<211> 158
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(158)
<223> n = A,T,C or G

<400> 349
agaaccacca attgcncgct cttaaataat agcnaacagn gggntgttat aaggtgcttt       60
ataatatcaa atagagcctn gagcaacaca natcacaggg ngctagggag ggnagagccc      120
cactgctgna catgcaaaac acagatgtga acccagaa                             158


<210> 350
<211> 370
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(370)
<223> n = A,T,C or G

<400> 350
agaagtcttc atcagaaatc atggcactga caggctgngg ttcangttca ggtgaagaga       60
atctcacagg cagatggcag ctactganga gcgagttctg tgataaccgc agaagggcat      120
tcgccaacta gaaagaacaa acagggcagt gtgagtgccc cgacanagat gagagccttg      180
gagggcagag catcagagat ggagacccat cccacagggg gcctctgtgt ctgtgagcag      240
gatgccttgg aaaggccaac ttcccagcga cacagacgca aaggcaattc cagcgaagaa      300
ttgctccctg tttttaccct aaaagtgatc tgtcagctgc cancctcatt actttttcta      360
tttcctttca                                                            370


<210> 351
<211> 145
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
```

                                        92

<222> (1)...(145)
<223> n = A,T,C or G

<400> 351
tggtcgcctg ctgccggctc acgatcancc ancactagaa nacccactcg ctagcggagc   60
accgcccgac tcacgcacgc ggacacgttc tctatggagg acccggtgcg gaaggtcgcg   120
ggcggcggac ggccggcggg gaccg   145

<210> 352
<211> 329
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(329)
<223> n = A,T,C or G

<400> 352
tagcatcaga atgttcctga agaagaaagn atttnctttg nagnacacat ggagcggatt   60
tacaagagag gntnnctgct tcgccattnt aggtnanatt ngcgactgcg agatccngga   120
taaganatcn cggaggnctn ctnctttaat ctgatgagan acctgnggca caggaagctn   180
attgtgggcn tggtaatttg gggggagcnt ttnagtacaa acccaanccc tttttaccct   240
tttnaaanag tncctgggaa caaacgggtt ccatnttttt taaccccaaa tttttaaact   300
tttgnttggg acccaaaccc ttaaaaaaa   329

<210> 353
<211> 129
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(129)
<223> n = A,T,C or G

<400> 353
cgtctactcc atgcanganc cactgcatan aaggactgtc ccaanctcag aggaactctt   60
ccaagaaacc tgtatngact acttgaggcc ttgaactgcc tanagngtgg gnctgccttt   120
gcttcctag   129

<210> 354
<211> 393
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(393)
<223> n = A,T,C or G

<400> 354
gctgtgcata ccccgagtgg ggctcctgtc aggagaaaag gccatcgctc aagaagcngg   60
ctcagcggca gctgctccat gaggagcctg aaggtggtcc tgcagcagaa ggaggagagg   120
acacgggagc tcgagcccca ggtgactctc tgcagagcta tggaggccag gagccgcagc   180
cgctgaggtg ggtgtccaca ggttagggtg ccaagaaggc atgtcccggc ttctctgggc   240
cttggtatcc ccacctggaa gctggaaata ggaaatgtga gggagaaatt aacatgtcaa   300
atgctcaata caacgcgctc gggcccctac agatgggtgt ggtggcttat gcctatcatt   360
ttggctttca agttcaaggt caacttgggc aat   393

<210> 355
<211> 194
<212> DNA

93

<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(194)
<223> n = A,T,C or G

<400> 355
gcatcccac tcgtgttttt aagtgtatnt ttataagata catgtattta caattganct   60
tttgttacat aatgctgaaa tgctactgga gatngtgaaa aatgtttcaa tttttatctgg   120
tccttatacc aaactaacat ggtntattat tatcacctta gtgatacagg anataatgag   180
ctaaaaaaaa ataa   194

<210> 356
<211> 242
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(242)
<223> n = A,T,C or G

<400> 356
tggatgaaga aattgaaaag cgacccaaag aaaaatttac cagtaaatat tgctggtaac   60
aatcgnttag acttnncnac acagnnnctc anggnnngac ttttgngctg antttncaag   120
canttcttgg accnacgcca tgtatcaana ggngnggntg tgaggtataa cctcatcggc   180
gatgtcggtg ccttctatgc tgcgaaacta cttcaggtat tacgttgctg ccagcaagtg   240
tt   242

<210> 357
<211> 236
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(236)
<223> n = A,T,C or G

<400> 357
aggacacgcc taaatgttgt gaagttgtat gttcacaaag gggattcggt gactgtgtac   60
acgagtggtg gtaaccccat cctatttgaa ctggagaaaa atttgtatcc aacaggtatg   120
gtaaccagat gaaatgccca gactgcagcc ctggtgaaac acgttattct ctgttgatta   180
aggtgtgata tttgtttttg ttttccccca taaacntacc ttttcaaatg aaataa   236

<210> 358
<211> 143
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(143)
<223> n = A,T,C or G

<400> 358
actctgacca gactctgang gcatacacca gtagaggatg tngaaccaaa gaagagcacn   60
tacgttcagc atctagttca gaagatgata agaagaagaa aaggaaatct agtcattcaa   120
aagacagagc caagaaaaaa aaa   143

<210> 359
<211> 129

94

```
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(129)
<223> n = A,T,C or G

<400> 359
aaggaaagcc acagcattca ttacgacatg acanntgacn ctatgancaa gtgagcatgt        60
atcngaaaag gagtctngac gaaagaggan tgaatttgac attaataaag cnatttattt       120
ttaacaaaa                                                                129


<210> 360
<211> 256
<212> DNA
<213> Mus musculus

<400> 360
tggctgttct ggaacgttgc tttgtgaacc aggctggcct cgaactcacc gagattaaag        60
gtgtatgaca cctctgccta gctccattct ctactgttct ctacaatgcc cgctaagtca       120
atgccacgga gaacaaaagc tcgctcctcg ctcaccagat gccgggtgga aactacattt       180
accacaagac tgtggaggctc tctagactct gagccaatca caacccagat gaaaagcttt       240
ttctcaaaaa aaaaaa                                                        256


<210> 361
<211> 143
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(143)
<223> n = A,T,C or G

<400> 361
ttcttgagtg ttttaagtgg atcgagctgc cgctgctaac ctgtgaactg aactgccaat        60
ttccagacaa cacaaacagg agttgctcca aagaaccttt ctaaacaggt ncncttgccn       120
cgctgaatat cgtttctttt gca                                                143


<210> 362
<211> 110
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(110)
<223> n = A,T,C or G

<400> 362
atagtgtgga agatctcagg gaaagngang gaacctgcaa gtgnggnata anagacctga        60
ctcctganng ttgtcttctg accacatata cacaatattg taaataaatg                  110


<210> 363
<211> 566
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(566)
<223> n = A,T,C or G
```

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<400> 363
gactgaggtg gggtctttct gattgatncc ngaanggaga cngacggang tgaggctcnc      60
acatgagngg aagctgncat tcccgngagg tgctttcttt agtgagaggn agacagaaaa     120
tcctttcct tctatggaac agnagagccn gaaggggcag gttcatcact caagccagga     180
aaacatctcc gnttcactga ccggcgccag gcctcacagn ttgggagaag cgacctacgg     240
nnnggaaata gcattgctct gcatgcttat gggaactgtt agaaaggacn agaagngcag     300
aaccctgctg gagcccgatc cagccagctg ctgaattctc catccgcaag nctccatcct     360
cactcctctg aactggcgct gccagaggca ccttgggaat nccagcaggt tcctgttgca     420
aatggccctc accaccaact cattgnctct gcatgcacgg ntcctcccag gggctggcgt     480
taaatctgga ctcacttaag gggntagann nggngnccta atccctttat tttgggnaag     540
gggccaagnt actaaacacc cttgac                                          566

<210> 364
<211> 450
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(450)
<223> n = A,T,C or G

<400> 364
actgagggct tgagtcacan gcgccnttct tggggaccct ggnncgctat cattggnaac      60
nganaggnca ctnctnctag ctnatganag gagcanaacc ctcgggnctc tgctggagtc     120
ncactgnggc atntagctca gttttctgtt ncattntctc ccttantact gaanattcct     180
tctgcattca tggcagggc accagccatc atagacactt gcctnggtat ccggntttgc     240
tgnagggncg aagngcttna gngacacatg tggctgttgc cnttctttct gcaccccanc     300
tcccaactgt tcccaccttc aaccctcttt cccattccaa cgctgctctg tcctatagct     360
tcacaaaaca nggagcgtgt ggggctgang tcaggacgt aacttgggca ctattcctta     420
tacaaaatat taaatatttt ttttcctcag                                      450

<210> 365
<211> 119
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(119)
<223> n = A,T,C or G

<400> 365
ggagaatctt gaaactctcc catacataac acttcaagcc aaactggcag cactgaccca      60
atctctaaat taagcgcang ngaaatgaaa tcattaaaaa aatatatatt tcctgaaag     119

<210> 366
<211> 183
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(183)
<223> n = A,T,C or G

<400> 366
ctatgatgac ctgccangat tctcatatga gcatggggtc ancacctgca gatgacctgg      60
tccgagangg tgggaccgat agggaacctg ttaaatcctt acactccgaa gatananctg     120
tannaaattt aanagnttng gctnngnntn nttntggaca gcttgccaga agtggggttg     180
gtg                                                                   183

<210> 367
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```
<211> 385
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(385)
<223> n = A,T,C or G

<400> 367
aaggaacatc aacagcagcc ctaccgagaa cgcanacaaa cttctcggct tgnggtgtct        60
cctcagttgt tcagagcttg agttttgctc gaggatgatg agacaaggcn ctaagagggn       120
aaggaggagt gngctaaggt tcctgccact tnctccgnnc ttnagtccac angaagcatt       180
gtaagaaggg ctgaaanaca agctgtgctt ggncctgaat actggngact tgaggattcc       240
atctgtttca ccaggcgtgt agggaggccg ttttagcaac atagcttcct tagcagtact       300
taaagacttt tctctgcatt ggtcatgtgc caagttacat tttgaactat ggggcaggng       360
aaggaaggac agctttggca cctgg                                            385

<210> 368
<211> 160
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(160)
<223> n = A,T,C or G

<400> 368
tgctcttctt tggcaatcac agcatgttta tttatgaact ggcttgcttg gaacctgatt        60
ctgacatctg nggttttttgg ctgaagaggt taatttttc ctttttgntn ggnttgcgaa       120
cctgggtttn ggggaggggga gcacaaagga ataaaaacac                           160

<210> 369
<211> 145
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(145)
<223> n = A,T,C or G

<400> 369
atcatctatc gaatgcggac tcacccagtt ctcaacggng ctgcctgaga gagaccttg         60
aaggcgggat ggcgtgtgat aagggcagag gtcttgcccc tatcctgatt tcagaaagac       120
agcgggagga ctcagaaaaa aaaaa                                            145

<210> 370
<211> 205
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(205)
<223> n = A,T,C or G

<400> 370
cacgcgtgac atcactctgt caatcacccc aagtccactc aagggacaag aaactgtggc        60
acaccaccag aagttttttt gttttttgttt tttgctgnat ttctttctat tgagtcccga       120
taaatacagc tcaactacac aatataagac agaccaatac atggtgtgtc cttaataaaa       180
aaaatctttc accacaaaaa aaaaa                                            205
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97

```
<210> 371
<211> 375
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(375)
<223> n = A,T,C or G

<400> 371
gtcctcctga acgttctggg acactccact ccatcacggc taaatagtcg cagggcgtgg        60
ccatatgagc anatcacagn taacgtaacc agtacctgtt gtgaggaggc ntggattgga       120
taaactgcag gnggtagaag atccaatccc actctcccaa aatactgaac aaatttgntt       180
atttctgggg tgggagtgan acagggtctc tccccgtact cctggaactt aggaacttat       240
tatgtagact aggctagcct caaactcaca ggagtgctgg gatgtgccac catgcacagc       300
cccaaattcc tttcacacaa tcttgagcgt tttataaata caaagcggag atgctgcctg       360
ccaccaaaaa aaaaa                                                        375

<210> 372
<211> 360
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(360)
<223> n = A,T,C or G

<400> 372
ccgtgccaac aaggatgcct tggctgaatc acaagaacga gtgcccctgc catcaagaaa        60
tatgggaaag ngcccaaccg agaacatcag gctggccgcc cgcatcatgt ggcgggtgga       120
gagagagggc actgggctca cagagggctg nctggtgtcc cgtggatgac ttacagaacc       180
ancgtggagc actttgggga ggaggagcag aaggaactcc gagtagaccg nggacaccgt       240
tcttgcagta ctggccacca cagagccngc agttcagcat gcagtatatc tcacacatct       300
ttggngngat caactgcaac ggtttnactt ctnanntgac cagagagggc tacaggcagt       360

<210> 373
<211> 362
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(362)
<223> n = A,T,C or G

<400> 373
actgagattg acgggctaga ggaaaagctg tcccggtgtc ggaaggacct ggaggccgtg        60
acctcccagc tttacagggc agagctcagt cctgaggaca ggaggtctct ggagaaggag       120
aaacacaccc tcatgaacaa agcctccaag tatgagaaag agctaaagct gcttcgacat       180
gagaaccgga agaacacgct cctctcggtg gccatcttca ctgtcttcgc cctgctctat       240
gcttactgga ctatgtgagt cagccatctc cagccactaa aangacgtgg taagtgcttc       300
cttctgctta gtaagagggg caataaagag ccccangctc tgctgtctgg caaaaaaaaa       360
aa                                                                      362

<210> 374
<211> 390
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
```

<222> (1)...(390)
<223> n = A,T,C or G

<400> 374
gctcattcaa tcaggtgagn tactgnanaa tatctccagg ncaaagntnt tttcnacaat   60
cccettngga aggtgtttcc tattagcaga tgactatgga tcnctggcag cctctggatg   120
cttcctcggg angtctcatg gcggggggcat attgattgtc tttcaattaa ttgcatntgg   180
tattttcat ttatcaaaag caaaatacnt gtnattaact ctgaagcaat acagtccagt   240
ggcaagagat ccctgctgct tgctgctgct gctgctgctn ctctggagat aagtcagcgg   300
gaaattattc ttacaaggaa actctaggat ggtaggactt ttggaccgta ttaattaaag   360
agaataaaaa ngaattaggg gaaaaaaaaa   390

<210> 375
<211> 119
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(119)
<223> n = A,T,C or G

<400> 375
cctgacagct caccegaaan atccanactg accaanggaa tactaangtc cctcgtcttg   60
gtgatntnca gggcgtcaat aataaagaga gagcagcagt tggggggaaaa agaaaacaa   119

<210> 376
<211> 284
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(284)
<223> n = A,T,C or G

<400> 376
acctttcttc tttttnaata cactcacagt atcanaacac cacggtttca tttactaagc   60
tctangagac cattntgnct gtggaggcaa ggggcatttg gncctgacct angtgaacag   120
ttgccttaaa ggggaaaaga ttnccagcag ganggctcag ngtttaaggg gcacttgcag   180
ctcttgcaaa agncctgggt ttggtcccca gcgcccacat agcagtcaca actattccta   240
actccggngc cagagtctct gaaccctcct ctggcctcca cagg   284

<210> 377
<211> 255
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(255)
<223> n = A,T,C or G

<400> 377
cgtttttcct aaatattgan actggcttgn atcaagacac acagnatatt gttcacaagc   60
atgtaactat ccaaaagaag tcttataaat attatgagca tggcaaaatc atccaggaat   120
acacccaaag tgtactttac caagataact tcagggatac acatgttgag tcatcaaacg   180
taaacagaca tgaaactgga aacaccagag aaccttgcaa atataaaaat tgtgtaaact   240
gtttaaaaaa aaaaa   255

<210> 378
<211> 110
<212> DNA

99

<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(110)
<223> n = A,T,C or G

<400> 378
aaatctggaa cctggtgtcc tggccatgtg ctgaatgcac gcacagcaca gctctggnat   60
ctgttttaaa ttatccatta aaataagtac agtcctggaa aaaaataaaa   110

<210> 379
<211> 210
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(210)
<223> n = A,T,C or G

<400> 379
ctgcgtctgg gatctgcctc aacgccttgn gagtcaccat cnacannatc ggagaatggn   60
ccctccgctt cttcggctgt ntggtcactt nnatctttca gnggnattnc ntangctaat   120
caaatggacn ggaccancat tttacttgga cggacaccat agnacctacc tcttctnctg   180
nggtctatct aggggggttgg ggtgggggga   210

<210> 380
<211> 112
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(112)
<223> n = A,T,C or G

<400> 380
acgggccatg atgaaatcat ccccgangag catccangaa ggngaagctg agngagcgng   60
gggaggtgtc caccttcaca gaggaagnta tanatcgaac cttgtcaagg ta   112

<210> 381
<211> 108
<212> DNA
<213> Mus musculus

<400> 381
ccctctgctc tcagccctct gggattttgc ttgtttgctg tttttgttta gttcagatct   60
attttgtttg tggtttggaa actttcagac cgaacagaga aaaaaaaa   108

<210> 382
<211> 181
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(181)
<223> n = A,T,C or G

<400> 382
catgcataac gggcatccag atgangaatc cgtgaacntt tngactggag ttgatcncta   60
acccaatgga ctttncctgt gctgaccaan cctttcatca caagcattat atancggttg   120

```
ntgnccctg naaatgtnan canacacgaa gngagatacg ctgtatacga ccactgtgca      180
c                                                                     181

<210> 383
<211> 210
<212> DNA
<213> Mus musculus

<400> 383
gtgctagagc gaatccatta taacccaggc agaggaaaag gccgatttcg tgatcattcc       60
ctctgaagga atagagaaca gaacagacga gccagactct ccatcatccc gagactggag      120
gcctgggagc cggggaacct acctggaagc cacatgggaa gaacagctgt tggagcaaca      180
agaacactta gaaaaagaaa tggaggaagc                                      210

<210> 384
<211> 487
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(487)
<223> n = A,T,C or G

<400> 384
agctccgacc acagcgtcca gaaacagacc ccaaccggaa gaggcggatc ccgatagaca       60
ccaaccggaa gaggcggctc cagatgagca ggagagaggc tgctctaccg gaggtcccag      120
gtttgattcc cagcgcccac ttggcagctc acaactatct ctaactcgag tcccaggaca      180
tccaatgctc atctttgaca tctgcaagca ccagacactc aaaactgtac agatggacaa      240
gcaggcaaaa gaccccccaca cataaaatac gtaaatcgtt ttaaaagtag cagaagaagc      300
anagttaatt agactgaggg acagatagga aaggtcagga gagcatcttg aaaatacact      360
tacctcagct gcaaagaccc ccgctgcagc gcccccaact tctgagaggc agtaagaagt      420
gttgaaactt gtccctnagg ggtatttgac tctaggatgg gactttcttt caagcattga      480
aaaaaag                                                              487

<210> 385
<211> 431
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(431)
<223> n = A,T,C or G

<400> 385
cacgaaacaa attcagncag gcagctcctt ttggggccta agcactggag acactcctag       60
aagtttctgg aaatctttgc tgttggccct gaaagacctc gacctctcgt cctgagcgct      120
atacagaaac ttcccgtaga ggcaccgtgg gtcaccattg gtggatctgt tgtatgcttc      180
ctgtgcctcc aacatgtcaa ggccactcca gcctgtaagt cactcggacc cagggaggct      240
tgccaatagc caaaccaaag aggcctgtga ggctaagcca ccagaagcca ggcacctatc      300
acatctatcg gctcgggaaa atgtcccagt ggcntgttnn gatccanctc ttgaaacgga      360
tcctaccggg aaccnaatcg tacacaacaa aaaggcggcc gacccagacc atcctgacct      420
tgccagcatg t                                                         431

<210> 386
<211> 217
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(217)
```

101

<223> n = A,T,C or G

<400> 386
aggctggcac ggctccgacg tctgtgtgga agcttctccc tcccttctga gcttctctag   60
actccttaca gcgcacaggc acagacacat cacactgcaa tccagggtat gtctacatnc   120
gagctgcncc gnatanactg gangggcttt gganggggatc cnttgncaga gcacncatgg   180
tgctggatta aaatccanct acaggtaaaa aaaaaaa   217

<210> 387
<211> 284
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(284)
<223> n = A,T,C or G

<400> 387
acgcatggac acgggnnggt ctactacatc accacacggg cccaggtttg actccataca   60
ggacctagtg cnggcacata catggaagtg aatgatggtc tgtgtgctacnt gcttacggcc   120
ccttgtacca ccactaaacc cccagacaca tagantntgg ncaaggatgn cgggggagat   180
nagacctgga acttcttngc acttngaact gcaagcttgg gcaccntntg cttanggaga   240
tntanaactg ggcacttngg nactgcagca caaaagagtg ggaa   284

<210> 388
<211> 774
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(774)
<223> n = A,T,C or G

<400> 388
ccccgcctgt gtatcaccac cancgtanca catgcacgtg tgcgacaggc cttacnttat   60
ggctcntccg accccactcc ccggattgat gtcccnggct ccggacaanc tgcaggccng   120
aaacttcag gaaactgaaa ccncccctgc ngggcagcct cccggatnac ttcctccnaa   180
tccttcccca gcaaatggac ancnttcagg gtcaccccgg gggtccnnc cctatgagtg   240
gagagggagc ccacctccgg cnccagggcc catggcctgt tacnnanaca gnccctngaa   300
ncngtacctg gaaaataaga gaattgccct cttcntgcan aatgaggaat tcangaaaga   360
gctgcagcna aaccgggact tcctcctccgc ccngaaaana aaccnattga natgtgaatc   420
ccagaaatcc aatcccctnt gcggcggttg ggaaatgacg gtgggtttcc ctcctctgtc   480
ccggaaccnt gantncctcn naaaagngtn gnangatncc ttgtgccngg acancttnta   540
tncntgggna attctanctc angatctntt tgaantcncn cancggtngt aacaaaaccg   600
ttttnggaat tgaaagaaan aanttttccc tgnntanttt gatggggntt gctgtnatnt   660
gaagncaggc tcccggtnta antggnaang gctaggttta ctaaaaaaaa attcggtggg   720
ttngcnaaan nggatgngtgg gttttgggtg cnaaaaggcc gaaaaaaaag gaaa   774

<210> 389
<211> 373
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(373)
<223> n = A,T,C or G

<400> 389
ctatttttgt aagaccttcg acctccatnc tctggtcgca tttcctgtgc cttctggnaa   60
catcgggagt ccaccagang aggatggagg cacgcgtgg gacattcatc atggggttgga   120

102

```
caccgcaca cngtgtgcca tggtggcttc acaatgggcg ttncgngtct gntgtgtgat     180
gcactcttag agcaagctct gtggctcaga gggaangaga cgggatcact cagaccctcc     240
cactccatat ggccagtgan gcgtccagga agacgcttcc tgctagcgtc atcataaagg     300
ggaacgcaaa gctctcagtg ctttgccctg agccccactg gatgtggtgt gtatgcaaaa     360
ggaagcttaa cct                                                       373


<210> 390
<211> 388
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(388)
<223> n = A,T,C or G

<400> 390
ctctacccac ttgtacataa tccagcatcc agcagaggaa agcagagtgt tgcgcacagt      60
ccctctgcta gcagcatgcc ttcccccaga cagatgcaca gtcaagattg gccgccgctt     120
cagtgaagag cgagtgttg aacttgcaac tgtttgccgg gactntggta cattaatatt     180
atatccaggg gctgaagcta ctaattngga anaattnata ttanattctc cngtttatcc     240
ttccacaatc atcctcattg atggtacatg gagccaggct aaggacattt tntataaaaa     300
ttccttgttc cgacttccca aacanataaa tgccttgctc agtcntcatn anaanaagct     360
tccttctgca gcagatggaa acatttac                                       388


<210> 391
<211> 122
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(122)
<223> n = A,T,C or G

<400> 391
cctgatggac aacatgctgc ggatgccacc ggngatgaga gcaggtttgc accgccagct      60
tnngttcgtt acggcctttg tntttgctgg atacttttat ttaaaacggc aaaactattt     120
gt                                                                   122


<210> 392
<211> 184
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(184)
<223> n = A,T,C or G

<400> 392
tcccagaaca tggtgctgct tatatacgnc cnntgatang cgtgnctcac acccngattg      60
gttatnctct acgcctcatt tgcatgttcc tcatntggng ggctactctc tgtacctcac     120
anagcctcat tatcatacct catttgcatg tctcacatgn ctattggggc atacttttac     180
agct                                                                 184


<210> 393
<211> 476
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
```

103

```
<222> (1)...(476)
<223> n = A,T,C or G

<400> 393
gcagccacca ggcatctgac cctgaggaaa aagggaagcc tggcagcatc aagaaggccg      60
aggaggagga agaaattgac attgacctga cagcgccaga gacagagaag gccgcccttg     120
caatccaggg caagttccgg cgattccaga agaggaaaaa ggattccagc tcctgaatgg     180
ccaggcctcc ccttaaccct tctacttcct ctntgccctc cacagctctg actctcacgt     240
atctcattcc ttcatccctc tagcctctcc ccaaggcaag cttaaccttt atatattctt     300
gtctcaggct ctcttaagcc atcacagtag tagaggcaca aggatgcgaa ggtgaagact     360
ctagctggta gtcactaggc taagggtgga tcagtccatt taggagaaca aaaggttttg     420
agatgggaaa ttctcccctt tgcctaatgc taagggcagg aggggcaag ccctca         476

<210> 394
<211> 184
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(184)
<223> n = A,T,C or G

<400> 394
ccttacagac tcaagactga tgagtaagga cagagtantn ntngcccggn aagaagaccc      60
canactaccc tagaacagag atggcnnacc ttctcctgat cgttcctgng ttgtgccact     120
gagggagaga gggtgangac acacanagcc atcaggtan gcnggagacc ctgaggcccc     180
tctg                                                                  184

<210> 395
<211> 339
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(339)
<223> n = A,T,C or G

<400> 395
cctcattcct gacttcagtc tcacgtggga ccggcccttg gtgctgacag catgggggac      60
tgnactgnag ctggcatgna tanagccanc ctggnttgcc cactggctga aganagcanc     120
gggngccggaa gcagananng agngngtggn ttctctctga caatcttttt gggcccactc     180
ccacgatgcc agcctccaga agagggaagc tgtgtgggag acggtgtgta caggccccga     240
ctctggcctt tgctctacgg agctggccgac ctcctgtgtc acaggtgaca tctagaggat     300
ccggcggtc ctcgatcagt gntggaaaag aagggtct                              339

<210> 396
<211> 289
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(289)
<223> n = A,T,C or G

<400> 396
ggagggatga ccaggcgtgc aaaagctgac gcgaggatct gaaaccagat gacccgggaa      60
aggcccngnc accaaaagtg acctcctttt ttaacccttt atgtcaaaat ataattggtc     120
aatgcaagag tctaccctgt tacccgncac tttttgttcc catcctataa aaatattgta     180
gaaatattgg acagnctccc ttcaggaatt cggatcagag ggggagctg cccacctccc      240
tcagcgctaa gaaaataaaa cttccatttt taagcttcaa aaaaaaaaa               289
```

104

```
<210> 397
<211> 264
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(264)
<223> n = A,T,C or G

<400> 397
agactgaggt gttcttngtg nccgacctnt tcgagactaa nacgagcctc tcactgcccg      60
cccctgcgat cagggaggga gatcctgtct cccgtggaca tcatcgacag gaacaatcac     120
cataacatgg tgtagatgct gcggcctccg gagcgctttc tctgaagcga ctgcacgttc     180
ctgctgctct ccgatctcat cagacagtag aatgtaggga aaagcttttg cccgatggat     240
tttgaaaaca tttaaaaaaa aaaa                                            264

<210> 398
<211> 326
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(326)
<223> n = A,T,C or G

<400> 398
aatactttta gacctactgg aacctcactg ttataggcta caccttggga aaaccatcat      60
attgaaagac attgtcaaag ttcaagaaga aatgaaaggt ctatgaggaa caaaaagtca     120
aactgtgaat gcattgtgga nggggggnat cttttactct tctattaata tatgnatcat     180
gtgtcacaat tgataaaagc catgttagca tagggatatt gaaagaagca atgtaccgct     240
ttctatccca gaactgtgag aaaattgtca gattctatct ttggtagaca ttctgagtat     300
gataaaagtt tgcaatgaaa aaaaaa                                          326

<210> 399
<211> 216
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(216)
<223> n = A,T,C or G

<400> 399
tgtgttaccc atggagtcan gacacggncc ccggacgcgtt nccaaaccaa ncaggtcccg      60
ttgattaaag tcaaagctca cntacaggag gcntgngccg gaggaccaca ggcagggcag     120
ggaggtattc tgggacttct tgaatagcta ggantcagtc agaacttgaa tttcgacagt     180
tttgaagacc gtctgtgccc ttcaatcaaa aaaaa                                216

<210> 400
<211> 244
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(244)
<223> n = A,T,C or G

<400> 400
tggcccccgc acatggtgcc agctcttatg actgncncct gacttnatca tatccctnaa      60
```

```
gatanncaca gtagccttga gcttgtattg cgcanangcn ccacanatgt aagatcanat      120
natgtgacna tgtattnctg agccaacgaa ctgngcctat gtggactggg ctgaggggga      180
gtggactgga ggggataaag ggggatggcg gagagaggnc agcanttctt tttcctgcac      240
attg                                                                  244

<210> 401
<211> 124
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(124)
<223> n = A,T,C or G

<400> 401
tgagggcatg ttgagtcggc tgcatctagt ngatccaacg agtaggagtg ttggctggta       60
agctgggcat ccgtgtatct gagtttctta gcaataaagt gaaatgcaat cttaaaaaaa      120
aaaa                                                                   124

<210> 402
<211> 113
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(113)
<223> n = A,T,C or G

<400> 402
agtggaagct tgtgancatg aggagctnng ancatgnaga gggaagcnan acnggagggc       60
tttntgcccc agnngagaga gatcgcccgg caggtgaagg cctatgagaa gca             113

<210> 403
<211> 104
<212> DNA
<213> Mus musculus

<400> 403
atacatgcct cacatgtgaa gccagccccc ttagctgaga ccagaattcc aggaaaccac       60
cctgtctgga aggcccaggc tacggagaac cctctgaaag tgaa                       104

<210> 404
<211> 141
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(141)
<223> n = A,T,C or G

<400> 404
tgttcccatg aacatgcaga aagaggagnn cgtgagtgtc tgggtccggg accccaggat       60
tcanaaggag gactttnggc actcttatat cnactatgac natntgcctt cacacnacag      120
agcagaggag acttgccttg t                                                141

<210> 405
<211> 101
<212> DNA
<213> Mus musculus
```

```
<220>
<221> misc_feature
<222> (1)...(101)
<223> n = A,T,C or G

<400> 405
ttgacccttg catggcagga gaaaattnan tgcttgagtn gttctctgac ctccacatgc      60
ggtcctgnta catgggntgt ntgcatacac ataaacacac a                        101


<210> 406
<211> 160
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(160)
<223> n = A,T,C or G

<400> 406
gcctgaggcc caacctgcct gaggccaaac cggntctctt ccaagatttt ccggagttat      60
cttcgagagt tcccactaaa aggttgatct gtctacttca aaagaacttt acttgtttag     120
ggatgggcct ccctcttct ttataaagtg tgtttgctgg                           160


<210> 407
<211> 185
<212> DNA
<213> Mus musculus

<400> 407
ggaatgcctg aggactctgt cccctctgtt taaagtctcc aggttagtaa gccaggaggg      60
agcccgccac ggccacctag tcagcaccct tccctgcccg ccatggatca cgatgagcta     120
ccccgggagg gctgtggggt gggggcaggc ataggtcaag gggaggggat ggcaaaaaat     180
aaaaa                                                                185


<210> 408
<211> 347
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(347)
<223> n = A,T,C or G

<400> 408
aagagatgga ggggcaagtt ctgagtgatg caactgctgc ggantaggag ctaggaacca      60
gttttacatc aaggaagtta acaccgtgtg taaagaagat gggcagtata gcagtccaca     120
caagtggcct tggtgaaaag actgccaggt tgagtggctt ggtttggagg aggtgtnttt     180
nttaacgctt nctccagctg cagtggngct taggattctg ctggtacatg acgcacaatt     240
ctgaaactca ctcatgactt aagcactgga gaccttcact ggcagactgg ngctggcgac     300
gctgggaggc tgncgctgnt gcactctncc ccacccgcct accacag                  347


<210> 409
<211> 251
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(251)
<223> n = A,T,C or G
```

107

```
<400> 409
acgattcagg accatnagca ccatnagaag ctcctgctct gtnagcatca ttnctcccag      60
ncctcaaacc ttgtcccttc tgggnaccac ncgagatgcc cctacgcnag aatanncngg     120
ctntnctctg tctctncaag ncntgagncc ttngnggggg agaactttat tnncttcagn     180
tgttgtctgn cctccacatg cgtcctgtng catgggtgta tgcatacaca taaacacaca     240
tgcacacgtt g                                                         251

<210> 410
<211> 150
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(150)
<223> n = A,T,C or G

<400> 410
tcacagtgga cccttggatt accccccctt ttttgcatgg nttgagtacg ccttatcaca      60
tattgccaaa nacntntgaa taaagagatg ctcaatattc ataacctgaa ctattacagt     120
tcaaggacat tgcttttcca aaaaaaaaaa                                     150

<210> 411
<211> 241
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(241)
<223> n = A,T,C or G

<400> 411
ggcccttaat acacacacgt gcttntantt ggtataaata acgtnattgn gcagaccaga      60
aacntgcgac aacttggagg gacttgcagt nggtttcatg gngctgaggc agtgaaaacn     120
tcacccactg ccatggtttt gcactataag cgcctgcatn agtaatnttt aaaaacatnt     180
ancacagtaa nanttctcnaa antctttct atgcnagctt atctngttag gcattatttt     240
a                                                                   241

<210> 412
<211> 117
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(117)
<223> n = A,T,C or G

<400> 412
cctgcaacat cctggccttt tctgcagaaa gaactganng ctttnggaaa ctgtaaagct      60
tacctctgng gaaaaaccccc aaagcattgt ttcaacacag gtttccttaa gttaaaa       117

<210> 413
<211> 125
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(125)
<223> n = A,T,C or G
```

108

```
<400> 413
agtaccgtga agacatggcn agtccaagaa ccacacctac ctacacacta ttngcagatg        60
accagtgtcc tgtgctgttt ttacaaataa acttgaggca agatcaaaaa aggaaagaaa       120
aaaaa                                                                    125

<210> 414
<211> 171
<212> DNA
<213> Mus musculus

<400> 414
gaactgagga ccagttccag gtaattgcat ggctgctgca ttcccgtgag gcccctgtga        60
gcggcatggg aaggcttctc catcacctcc tgcctcccc caggtgcctg ctcttgatca       120
aaccaaatca aagcgcaaac aagttccagc gggaaagttt aaaaaaaaa a                 171

<210> 415
<211> 415
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(415)
<223> n = A,T,C or G

<400> 415
aactgagctc ttcacatatg gtgctaaaga tgtctactgt canctcanac ctgtctggaa        60
gtnntntcag aagactaatg cgacctgaan ttcctgggga gggtanagtg gctgcagccn       120
cncctgtgta ncggattnta tatngctgat anattgacta caagcccgaa aanggnataa       180
nggactgtgg gnncccaggn atggagctga tttcaggnat gnnactacca gctctatcan       240
catttnngac tgcanacgac tctaatgctt tggacttgan tgcatcttac ccgccngacc       300
tttccttatg tatctgaaga gaatncctt gccccnctctg cttgcaaccg ctctgcaanc       360
tctgatctca ccgaagttnt nggngttcca tattttnctc attccctac aagtt            415

<210> 416
<211> 356
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(356)
<223> n = A,T,C or G

<400> 416
taaaaacatg ccctgaccc tcttgccaaa tgagtntctg ntcatgaggc ccaccaagat        60
gaaccancca aggagggntc gtgnnctgcc ctgtacgaac antgactgct gacngtgtga       120
tgagcaagct gagggtnctg aaatgttgtc tgccaangnc catgaaggaa gtggnctcac      180
ctggtcaccc cangangtg gcanactggc ttgctgganc atgctnngcc agaatnctgt      240
gancctctcg gaccncttct caggccngga cttattnaac ctancccaag angatattna      300
nataanccc cantgtcccg agtcttntct ganaatgngt ccaccaacat cttaga          356

<210> 417
<211> 346
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(346)
<223> n = A,T,C or G

<400> 417
```

```
cccggacccca ccctttggac tccttggana agcaaatgga aaaggcgggg gtggnacaac      60
ggggntgccc tatncctgnn gnttgaaatg atagtgagcg ttgttgtccc atagcctgtc     120
attggacaca gtaatgattc tgggtagaac acagagcttc cccattgttg aaagcttagc     180
aggatccttg ctacaagttt atttacctct agaaacaagg tcagtcatgc agaggaagga     240
aagtaaccct ttccgtgcca gacactgtac tgagtgctca cctgtttgag ctcctgcagt     300
ctaatgcttt cttaacactt attaatcaca ataggaagct gggtgt                    346

<210> 418
<211> 119
<212> DNA
<213> Mus musculus

<400> 418
tcgggttcaa acgtttgctg agagatgccg tggtaaccat gacgccacaa tggaacattc      60
ttcccgaggc gtagaagaaa ctccgctgta gagctctgct gcataaggcc acacagtgt      119

<210> 419
<211> 167
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(167)
<223> n = A,T,C or G

<400> 419
aactgagagg ccaacagaac acgnagagac attactgcnt gtgtccatga ctgggacnng      60
actctgtncg gntttccctg ggaatccacn agngatcatg ctcttcnaag aaccaatgct     120
atgcaacann cncttcacat ntcgagtgaa catcaatgtg gaatgag                   167

<210> 420
<211> 313
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(313)
<223> n = A,T,C or G

<400> 420
gaaaagggtc atgcagnggc ctgagggtgg aggnataccg ntaagccttn cacgcgactg      60
antgnggggnt gagananaact ttcntaatng gatnntganc atgccncttn atctctnnaa    120
gncttgataa ngcctannct ctatntctaa caggctntga gtagannacc tcatgccact     180
gtccatncat tgataagagc atgctacnng anagcgccat ccttttgatt ccctttctcca    240
gctttctctc ttaactgtat gnaaacactg caaatgaaga acaccctggc taatnctaag     300
gtaaaggctc tga                                                        313

<210> 421
<211> 196
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(196)
<223> n = A,T,C or G

<400> 421
gagctgctga gagccgacng gaagcttntt gaacgcngagc cactgagaat ggacacttgg      60
atnccacttn acccttggaa aacacacgat tgtattcaan gagggagaac aagngantgg     120
tattgatggg atcttgtttt cagtanttaa gaaagtcnaa cgngaatgga ncgagaccc      180
```

110

```
ttgtatgccc aatgct                                                        196


<210> 422
<211> 272
<212> DNA
<213> Mus musculus

<400> 422
aactgagggt ggagggcaag gtttggagac atctgaagcc aagtcctgcg ggccacatga        60
gatcttttgc ccatttccac cctgctgttc agtcctggtt atcactcacg gccagagctc       120
ccgagttacc tttgctgcta tgccagcccc atgcaacaga ctgtccaccc cacggtcagc       180
ctccacaaca cccagcaacc cggtagaaac aaaattctag aagcttataa ttaaggagtc       240
ggatttacgt gtcaataaat tttcagttca ca                                     272


<210> 423
<211> 459
<212> DNA
<213> Mus musculus


<220>
<221> misc_feature
<222> (1)...(459)
<223> n = A,T,C or G

<400> 423
aactgaggtg gggtctttaa ccctatatac ccttggccgg ctaccgggaa gactgcgtct        60
cctgacgatc gtaacgaana tgtaccngtg ctttccttnt ganagtnaan nccgccctaa       120
tatgtgcanc angctaaccg ngnggaanct tgcctgccag aaanaaancg cctgtngtnc       180
tattanggaa agccgggnac taangtctgc ttatgncaaa ngcccagnaa tgtccatttg       240
agatccanga gccacnaaga agggggggcta cttggccaac atggctgatc acgtgcctga       300
ggcatgccct ntgacctcac cagngtanca cagaaccatc catacaggcc ttgggcagct       360
ggaaatttac actgntagct cncccatgtg ctaagttagg aactggattt ggattggctt       420
gggntggact cttatttcca agactggtga gggaaacac                              459


<210> 424
<211> 277
<212> DNA
<213> Mus musculus


<220>
<221> misc_feature
<222> (1)...(277)
<223> n = A,T,C or G

<400> 424
acaaatctgt ggtcataaag acagacagtt tnaatgagaa gacactgcaa atgtgctgga        60
agacgcagct gtcctgagag ggcacggngc actgncggtt acagggtaca agtatntgtg       120
accancgaga cccattagtc cacactgctc gtcccgtgca tttttcctat ttaaggcaaa       180
aaaaatcatn gagactagag tactttggaa tttctagaag ctcccacctt attctgaaat       240
taaaataaaa cccgtgctgt tggtgtaaaa aaaaaaa                                277


<210> 425
<211> 117
<212> DNA
<213> Mus musculus

<400> 425
gggctgcctg ggctaaatag tggattcaag accagcctgg gctacataag acactgtctc        60
aaacaaacaa cacaaaacat catcattaaa aacaacaaca ggagtgaaaa aaaaaaa          117


<210> 426
<211> 124
<212> DNA

                                111
```

<213> Mus musculus

<400> 426
aacatgagaa agtatagctt ctaccattga gctcaatgca ctgtgtgtga aggcgctggt   60
tgctgctgta gggagagaat acaaatggga caataaaaga ctccgaacca tggaaaaaaa   120
aaaa   124

<210> 427
<211> 112
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(112)
<223> n = A,T,C or G

<400> 427
cggaaggcat gccaaacngc ttacgcttcc caaggcacaa gatctttccc agcatgggaa   60
agatcctccc tccctccntt nttccaccat acactcaata aaataaaata aa   112

<210> 428
<211> 258
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(258)
<223> n = A,T,C or G

<400> 428
aacatgagtt cggccggtac tccgctctga tcatcggcat ggcatacggc gccaagcgct   60
acagttacct anacccccnn ncagaggagg ngaggagaat ancagcnnnn gnanagaaga   120
gactanntga nttgnancgg ntngngagag aactggcagg aagctcaaga tgacagcatt   180
ctcaagtgag gcgtcagcga gcttgctttt ctctagtcgt tgagaacgaa taaagcttca   240
ttgtgtgaaa aaaaaaaa   258

<210> 429
<211> 351
<212> DNA
<213> Mus musculus

<400> 429
ggaagagact gtctttgaaa ccaggaatct gagatgatgt tgagatggag atgacaggcc   60
tgcaaggaca agagaaaaca tgtagttctg tgagctctga tgtcaacctt cctggacaga   120
gcctgcacag gccctagggg gcagcataga gacctcattg agactagccc acagactgga   180
gggcccccaag gccaggctga tgtgggctgc tccgtcagcg tgcctcctgt aagggacaag   240
agcatcctct gataaggtgt gatggagcag ggggcctgag gatctctgtg cgccttcctg   300
ctgctttggc aacaataaat gaagagtggc tttgtagctt aaaaaaaaaa a   351

<210> 430
<211> 179
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(179)
<223> n = A,T,C or G

<400> 430
agtggaaagc ctgggctga aaacggtgag gctcagngat gggacaacag cctacngtcc   60

```
agcaggctgn naaangggga gaagctgntt gaagggnaag ngatccagct ggaggacggg      120
accacctgcn nacattcacc angtgacgat acngaaagag tntttctcct ttgaagacg       179


<210> 431
<211> 112
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(112)
<223> n = A,T,C or G

<400> 431
caacagaaac atcctacttg gaaatggctg cnggctcaga acctggaanc nngtagaann       60
tagccctgnn gtagntgaga aatccaacng ggtggnccac cagttataca cc               112


<210> 432
<211> 137
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(137)
<223> n = A,T,C or G

<400> 432
tatcaactga caaaagnctg ggtgatatgt tctttctccc agngatgaag ggattntctn       60
ctctagggtt nccctcagac cntgnanaca tctgnttttc atngaccatc ngccccaata      120
aaggaccctacttaa                                                  137


<210> 433
<211> 400
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(400)
<223> n = A,T,C or G

<400> 433
ggctcttgaa tgctgggatt aaaggcattt gccactacca cttggctggt atctcttata       60
tgctggacta gccactgcaa ctgagaatcc ccctccacaa tggcctntct tcaggacctt      120
cagccctgcc acacagtact aaacctcagg tgntccttcat gacttcttca tgctttcaaa      180
accaacacca tctagccgaa tcttacacat taccaagntt ggcttggcagc atgagatgca     240
gntttggcca ccttgnatna cagctttttat gtgctgaacn ctggggagat aaccccctga      300
agatttacc ntcaggagat gctggccctc ttactgaact aatatttcan gttctagctn       360
acctgcaaca atttgtatcg ntaaagcaat aaagcaaagg                           400


<210> 434
<211> 516
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(516)
<223> n = A,T,C or G

<400> 434
gactgagcat tcccgtggtt tggtatggct atcggtggaa ccctggttaa gctggtttac       60
```

                                113

```
tttgaaccga aggatatcac ggcagaggaa gaacaggaag aagtggagaa cctgaagagc    120
atccggaagt atttaacttc taacactgcc tacggcaaaa ctgggatccg ggacgtccat    180
ctggaactga aaaacctgac catgtgtggg cgcaaaggga acctgcactt catccgcttc    240
ccgacctgtg ccatgcactt gttcatccag atgggcagcg agaagaactt ctccagcctc    300
cacaccaccc tctgtgccac gggaggtggg gctttcaagt ttgaggagga cttccgaatg    360
gtaggttggg cttgcccatc ttcgaacagc cagctctctc atgtgatcat agtgtgctca    420
tctcatgcta agacctggac cattaacctt gggacctggg catgtctgtg cccgngggtt    480
cctcttccat atgataataa atatatgacc ctttca    516

<210> 435
<211> 197
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(197)
<223> n = A,T,C or G

<400> 435
tcaccctgag tgacggatgt gagataagag atacatgcgg antgtgannc actcatcnca    60
gttttgcatg gntntgnntg ngananatca catnctctnc ctcntnatgt ncctccggag    120
acggatgtga gaaaagagtt acatgcgant ntgagtcagt caacacgttt tgcatggtta    180
agttaaagaa ataaaaa    197

<210> 436
<211> 264
<212> DNA
<213> Mus musculus

<400> 436
gtgcatccca ctcgattggt tgaccgactt cttgagcggg tgagctcctg ttggaagcct    60
tgctttatgg cgctgtccca gtgagaagcc gcttttctgg cattcgccag cttcgggtca    120
catgcaacta cttctcttcc tgccgtctct gctgggagtt tgtgaagttg tttattctgt    180
tacagcttgt ttgactttca cataggcctt atagtctaat acaattgaga aaaagagaaa    240
atttatgacc ttgaaaaaaa aaa    264

<210> 437
<211> 162
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(162)
<223> n = A,T,C or G

<400> 437
ctaaaagagc agcaaagaag ttacnntgat tttgcagtcc aggccctgat gagttttgaa    60
gacaagtgaa ggtacagtgg gtgcagcctg tgtccttgga cccagcaaaa gctaatgaag    120
aaaataattg gaatttaaaa tataaatatc taataaatac tg    162

<210> 438
<211> 262
<212> DNA
<213> Mus musculus

<400> 438
gtcgttggtg ctgccagggc gtcaataata aaaagagagc agcgttgggg gataatgtcg    60
acatttccac tcccaatgac gtatatgtta cagaattgga cggctgaatt tgaacagatc    120
ccttcgagaa ttgagacttc aggtcaactc cacgcgcttg gacctgtcgc tgaccaaagg    180
attacccaat tggatctcct cagcattttc tttctttaaa aaattgggtg ggattaatat    240
tatttggaga tacaaaaaaa aa    262
```

114

```
<210> 439
<211> 125
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(125)
<223> n = A,T,C or G

<400> 439
aggccagggc ccttgtggga cccagcagct cattcaacat aaaagtatat ttttgaagta      60
cctaaagtat aataacctca cctattatgc caaaattaaa taatcangaa tttacaaaaa     120
aaaaa                                                                 125


<210> 440
<211> 101
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(101)
<223> n = A,T,C or G

<400> 440
ggacctggac cgctggctgt tccttctttg atcccaggca tgatttcagc ttgtagaata      60
aatgagaaat gcctgtnggt ttaattaaaa gaaccgcatt g                         101


<210> 441
<211> 423
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(423)
<223> n = A,T,C or G

<400> 441
taacaactgg tggagcccag agccctgggc gaggatatgg ctgtgtgcct gaggaccttc      60
acacaggcac acagtgctcc acctgtcttc ttacggctgg caatgagatg gtgctcctta     120
caccgtggac cccccgaggg gtcttnctca ccaccttcag ccggaaagtg cctgaccgta     180
gaacttcatg tgtattagtt gctcctgaga agaggaagag ctgtttttgat acccgtatct     240
ttcgaggtgt cagtccatgg tctttggctc cactgagtcc agggtcacag caagcctaaa     300
caggatggtg ggctagacct gccgaggggc agacctcgaa gctcacagca gataggaagc     360
tcagagataa gactgaagac aagcttcagt gtacttacat ataataaatt aaatctttaa     420
aag                                                                   423


<210> 442
<211> 396
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(396)
<223> n = A,T,C or G

<400> 442
tctggctgtc ctggaattca ttatgcagag taagatggct tganactcac aagagatcta      60
actgcctctg nctcttgagt gctganatta aaggtgtgtg acaccatgcc taagtgtccc     120
aagtttaaac tttccagctt ggaagtaaat gaccaggaaa taatacagtg aggattccag     180
```

```
cagagatcac ctccccaggc atcctaactc ccaaagtgag agatactctc ctgttatcac      240
tcaatctcca tcgacgaagg agccactcta ccactctggg aggtgaacaa cggaaacaga      300
cacagaagca gactgcccat ctgatggggc agttatgtca atggatcatg aacaagttga      360
gtcacaagat ggaaccagga aggcaaaggc ccctga                               396


<210> 443
<211> 217
<212> DNA
<213> Mus musculus


<220>
<221> misc_feature
<222> (1)...(217)
<223> n = A,T,C or G


<400> 443
cttgaaggag tacaggaacc acccaaccct gcaggtctnc ttgtaccggt cctggagaca       60
ttcccccaac atcacctgcc tgttacaggt ctgcagcata gtcaccacct gggccatgat      120
tgcatttctc ctgggaagac ccatgccctg agagcagtga gccacctcag cttctgtctt      180
agtctctgga gatggccctc gtggctcgtt tgtattt                              217


<210> 444
<211> 184
<212> DNA
<213> Mus musculus


<220>
<221> misc_feature
<222> (1)...(184)
<223> n = A,T,C or G


<400> 444
tcactgtcgc cgcccacagt gacgncnncc acagaaaagca cacaccgtag ttgcggacgg       60
cctgtggtna agatgtcttt gccatcccca caggacggac ggacnggant ccacaaggtg      120
cgcagtngtc nccgaggccn gccnnganag ganccgattc ctcacaggag gaaggagcac      180
gccc                                                                 184


<210> 445
<211> 185
<212> DNA
<213> Mus musculus


<220>
<221> misc_feature
<222> (1)...(185)
<223> n = A,T,C or G


<400> 445
ccattgagcc aaagaaaggc caccccccca acagccccca cacctggata anagcgccct       60
gcaagaactt cttntggaaa accttctcct ngtgcaagtn accccancct gggcatagca      120
ccctggccac cctgngagat gccaacggag acctgaataa agactgtcaa tcagcaaaaa      180
aaaaa                                                                185


<210> 446
<211> 300
<212> DNA
<213> Mus musculus


<220>
<221> misc_feature
<222> (1)...(300)
<223> n = A,T,C or G
```

116

```
<400> 446
ctgaagagct accatttggn tgctgggatt tgagctcatg acctncnnaa gagnctgnnn      60
cggngctntt acccnctnaa nnatttcacc agacccnctg atcctccttn tgcgnatnct     120
gctacctgct ganaggcccg ggagctcttn tggagactat gccctatcct acgtcatcac     180
ctgcagctgg ttccaggctc caaggatgaa ttggcgggaa tggacttcc cccctttttt     240
ccccctctt ttctaaagcg tgtctgccat taaaaatttg aaccttgagc aaaaaaaaaa     300

<210> 447
<211> 152
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(152)
<223> n = A,T,C or G

<400> 447
ctggtgatgt ccctccctgg gacacatcca gaggggtgtg caggagtcca aagaaccang      60
gactcaggac ctgcgggcag ctgacctctg ctgctgtcac tgcacagaaa tttttaaatg     120
actttttatta aatccttaca aaacagaaaa aa                                  152

<210> 448
<211> 247
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(247)
<223> n = A,T,C or G

<400> 448
acgactgggc ttcagtgtgt ccgtggggga gtcagggtca ggcggacccg aggtctacca      60
tgcacacgt gtttccgncg ggcacgcata cacncacgtc cctgaccatc ctgttgccga     120
gttggtgccc ccggnccttc agtgaccccc cccacacttn gtnngagcag nggccctgcc     180
tcanaatggg cagacctttt aggaaactng gatcanacgn gactcggctg gcaccccact     240
ggtgccg                                                                247

<210> 449
<211> 228
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(228)
<223> n = A,T,C or G

<400> 449
tgaagagcag ttttgtccaa aaagaacatc atctccagcg gagaaagggc agctctgagc      60
ctcgaggaga gactncattg tnanctctca gactacatac cttggnctna caatgaaaga     120
atccaatatt ggangcanca ngaaaggaac tcagngcncc tngcnccagg tcaangngtg     180
gacctcatag ccttttttggt cagngtgtnc ctagggaaac ataataac                 228

<210> 450
<211> 136
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(136)
```

117

<223> n = A,T,C or G

<400> 450
agtctacata ccaagctcca gnncagccaa ggctacncag anaaatcctg tcttggaaaa   60
caaccgnncn nacaancctc caaactgagn aatctgtatt tagaacgatt gctcattntt   120
atgacaaata aagtag   136

<210> 451
<211> 485
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(485)
<223> n = A,T,C or G

<400> 451
aactccctgt ggttggaatg gcttctctct ttcattcaga gggcttctct ggatcaagcc   60
aggcgaanaa gctgagactc caggcataca actggttatc cagggagctg gaccttcact   120
ccgacttcca gctctccacg cgctgctcac cgtccctgtc ccagacagga aacagtaact   180
gatgctggaa cacaggctg tgggacccgc ccactaagga tctctcagcc accggcagcc   240
acagccacgg aggagctctt tgtggtcttg gcttttcaat caaggtttgt ggccaaggct   300
agagaggcag ctctcacctt caatgaaagc atctgggtct cagtcaagat tgatctgcac   360
tcggatggat tccctgtctg ccagacaacc ttggaatcca ttagggccgg gatagagcac   420
gatggaaggg gaaggcgcta aggcacgcaa catgtcacgt gacaccagca gtttccgttc   480
cctct   485

<210> 452
<211> 558
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(558)
<223> n = A,T,C or G

<400> 452
ctgagagtac cagtgatggg gactccagcc tctgtcgtga gcgagccacc cctgtggcag   60
gtttcaacac ctcagacccg gggccgcaag gggcctctg ccaacatctt ccaggatgct   120
gagctggtcc agatccaggg cctgttccag cgcagtgggg accagctggc tgaagagcgg   180
gcccagatca tctgggagtg tgcaggggat caccgtgtag ctgaggcgct gaggaggctg   240
cgcaggaaaa ggccgcccaa acagaaccac tgcagccggc ttagagtgcc ggagcctggt   300
tctacagcgt ctgaccccca ggccagcacc actgacacgg cctccagcga gcagtctggg   360
aactcccgga gaacaagtgc tagagccccc cggaactgga ataagccagg ccccacaggt   420
tacctccacc agatcagaca ctgactggtg aaggggtggg gaggtcctcc ccaaacactt   480
gcagggactt tggccaaang gcttatggag ttgtaaaaag gacatntgag cangcccttt   540
gtaggtgaaa aaaaaaag   558

<210> 453
<211> 221
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(221)
<223> n = A,T,C or G

<400> 453
attgtgctca gcacagaggt gnttcgtgac cnngactgta cttctnaatg cntgcatgga   60
tgccagacac cncgancngn aagcgtncnt nagngctnca gagcttatgn agtgntaaan   120

118

```
gattctcaag tggncatctg acccaccatg atacagntct gactgttgct accacccnta      180
ggaagaaaac gctgagtcac cngaaaccaa agaaaaacaa a                          221

<210> 454
<211> 181
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(181)
<223> n = A,T,C or G

<400> 454
gctgggaatt aaccttngna cctgatggaa naagcggcga gncaaccaca acccatcgct       60
caagccccat tgctgggcct ggtgacaacg catgtcagtc ctgcctcagc ccctgaatg       120
catgtttaca gatgtgcacc agagcacctg actcaagttt taaacgatca ttttgagcac      180
t                                                                      181

<210> 455
<211> 457
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(457)
<223> n = A,T,C or G

<400> 455
aacctcagaa aaaagtcttc aaggctcgga aaacaatgag agcngagcga tcgccagcag       60
ctcgatgctg tgcncagagt caagggggag ctgctgagag ccgacgggaa gctgctgaac      120
gggagccatg agaatggaga cttggatccc acttnaccct tggaaaacac agattgtntt      180
caagatcgga aagaagtgaa tggtattgat ggggattttgn tttcagtcag aagaaagnnc      240
aaccggggaat gggaaaagan gaccccttg tattgcccaa tggtttgcct gtnataaaac      300
aaaaccnnga agatttttgaa atagtngaag gcttttttgtc ccccccant ttttctatan      360
ttnnatnncc ntaacanaac ngggggggg nggggggggg ttcnggggncc ttntnaanng      420
gttngntgnt cccccttttt tttgtctagt gggggggc                             457

<210> 456
<211> 237
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(237)
<223> n = A,T,C or G

<400> 456
gctggcacgg agcatnctat ggcatcgtga gcctgcagct gatctccggg gtgngtgctg       60
agggnaccat cacatacngc tgttccaccc agagtgcana ncnctcactc tangactcag      120
gctagaactg gactgcacag angaccctcc cncnangata aatganactt anancccntn      180
tttaccantt gcggatctat aaaatngnac ntaactatac taccaataaa caaataa         237

<210> 457
<211> 348
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(348)
```

<220> n = A,T,C or G

<400> 457
tatggcatcc aaactgngct nntacaagtg ccctgtctgc ttncagnact nncacngaaa   60
tgtcaaagtc caccntggtt aaacatttct tgtantccct agtccgctna aacaacagta   120
aaacgttggn nccntganca nntgctaaat aaagaaatat ntgcgtgncn nagccttaaa   180
tttgctatat cctgtntcaa tctactgcta acatagcgtc ntagagaatn gnagctaact   240
ttcaaatatg nntctaaaat gaccagaatc agccttccaa atgaagaant agcaacgnct   300
aatgctgcgn tgattatctg ggacagngca tgacataagt agggcata   348

<210> 458
<211> 101
<212> DNA
<213> Mus musculus

<400> 458
acgtcccact gagtcttgcc cacctctccc ctgaaacttc cgcgtctaat aaaaagtaat   60
gcgtcttggg aacacccaag gttggtcatg tggcagcata a   101

<210> 459
<211> 246
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(246)
<223> n = A,T,C or G

<400> 459
gctgtgaaca gcttaccctt gatcgtgatg ccgcagaaac nncaagagag accttgtctc   60
agtgacgtgg aagangaatc agtgcccconn aagtngnatc ctgaccttct tttgccatag   120
catgtgtgag cctgnactca ccccttccct taataataat aaaacaacaa ctttgtgant   180
tgngacnnat nnanncatag catgngtgag cctgtactca ccccttccct taataataat   240
aaaaca   246

<210> 460
<211> 294
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(294)
<223> n = A,T,C or G

<400> 460
gcccacctgc atccgcttcg gcttttaaat gaaatcacct gcaactcccg ccgncggcac   60
cgaagngcag aagatgccca ggtttccgga gcaacagctc agngtcatct atctccgccc   120
cgcggcgcct ttcccgccaa aggccgttac caccgcggag catggtggga cacagcttgc   180
aagataggtt tcacccaatc tttttanagc gccnagctgc tttcanagag ggtctacccc   240
cgaggtggcc gacgattctg gactcagtgg ggattaataa taaccgcttt aacc   294

<210> 461
<211> 106
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(106)
<223> n = A,T,C or G

120

<400> 461

```
gaaaagcgca gggcccatcg accactgaag caacgggag ggagctggaa gacggngatg        60
gnctgganat cantgctgca ctcttcctgn gagacgattg aagcct                      106
```

<210> 462
<211> 347
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(347)
<223> n = A,T,C or G

<400> 462

```
gagcctttga agaccagata nctaatgaac tctagatnca tccatggttg cntcngntnc        60
cttcntannn atgtnncat attannganc gttnggnccn tccngcctcc gagcccagga        120
tgcacctgga tgaaaacaaa atcccacgtg actggccctg agctcagatc atcatggcgt       180
ctcccagtgg gaagggatct tggacgcccg aggctcctgg ttttgggccg cgggcgctag      240
cacgggacct ggtggactcg gtggacgacg ccgagggcct ttacgtggct gttgagcggn       300
gcctctgtgc aacaccactc gccggnggtg acttgcgcca agtgcgt                     347
```

<210> 463
<211> 472
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(472)
<223> n = A,T,C or G

<400> 463

```
agctttggag aagcctctga aggcccagga acccggaggt gttctgctga gagtcgacat        60
catggatggg gagagcagag gaggacacga aggccaaggg gagcagcagc agcaagaccc       120
tcagtcgaca cattgcaggc gccccttatc cnggtttagc ctcactcaga tccagtacct       180
taccttttgcc ttcattctcg ccttntgctg gacacccggn cacccggctc cggacaccgc      240
cggatacgga cagttaatat ccagttctgg tctcgagcct gggcaaatta ctggagcgtt       300
cgttgggtgt cagggctccg ngagactggc cacgcnctaa ttgtctcacc acgccctnca       360
cacacggtcg cctaggatcc tcactactcc accatcgggt ctctggcata tccacatctg      420
tattgttgac tgaccacacc tcttaagcca tactcctcgt ggatggccac gt              472
```

<210> 464
<211> 480
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(480)
<223> n = A,T,C or G

<400> 464

```
agcctcaaat gcagcctgct tgnccacctc cttctccact caggnccaca gctctgcatc        60
cctacacttc tctggntccg gntcactgaa aaaacccaan atccacatgc ccacggactc       120
nttccccact gactnnatcc cacctcctgt agagttccta aacaatccca anaaagcacc       180
tccagccaaa aanggaccec ttgatgactt gganaaagac cctccaggng ggnngnccan      240
aangtgganc tngcctccct gnaagagctc ttctggaaca tggcaagtcc aagccaacag      300
gctgggaccc canagatttc ctctgggagc tcacaatgct acatcaataa cttanattac      360
ttactgcaan aaaagaggat gctggttgga naatttctcc ntgtccctgc angtcatctc      420
nccagtgcat ccgggtgaaa ctgtattctt ncctaagcnt cacccctttgc cttgcttcct     480
```

<210> 465

```
<211> 139
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(139)
<223> n = A,T,C or G

<400> 465
ctggaacaag aggggtctca ncccctcctt tgtggactta gcattacagt cnctaaatgt      60
gtggacttgc aacggaaatc anattcaana atcatgttct tgttggacta ctgaaaagct     120
tgaaaagatt tcatatact                                                  139


<210> 466
<211> 216
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(216)
<223> n = A,T,C or G

<400> 466
aggcctgcat gcttganccg ttgcntccgc cccgcggnag cacnatgtct gnatgccatc      60
nccccacagc tgganagggc agtgctgnag cagnncctta ttgcatgnag ccactcttan     120
aattctctca gntgaagtgg tgnttttat tatatataan gtacactgtt gcngncnnca     180
aacactccag aatnagggng tcagatctca ttacag                               216


<210> 467
<211> 277
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(277)
<223> n = A,T,C or G

<400> 467
tgtggggttg ctcactgttc ttcttgaagg aggagtgact ggccgccacc ggcacctgga      60
acccagcacc caggaggtga acccggacgg acctgaggag gatcctgtgt cctgtgtcct     120
tgggagacta ctcactgggg cgagatgacc acagccacca ctttnggga cgccgtcttc     180
tngctganca tgaccagggg agaggacgcc ctgtntaana gctctggagc catcgtggct     240
gccatcgtgg tnggtngtna tcatcattgt caccttg                              277


<210> 468
<211> 363
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(363)
<223> n = A,T,C or G

<400> 468
tgtgcatgca gagaccacag atgtcatctg cagaaacaac ggtcaccttc nttganacag      60
agnctctnat tgncctggag ctgccaatta gncncaactg cagccagcan gcccagagc     120
ttctcctgtt tctgcctccc tagcactggg gttaaaagtg cagaccacca ctctgcacct     180
ttatttacat gggtccttgg gatcaagttt aggtccttca ggctccagag gcaggtgcat     240
tacccactgt tgtgggtggg cctgatgcag ttcttgtgac ccatcccta atgaataaag     300
```

122

```
gagccaatca ctgggcaagt aggagggact tccaggntgg actgaggaag agaggaagca      360
gga                                                                    363

<210> 469
<211> 291
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(291)
<223> n = A,T,C or G

<400> 469
cggggctgtc tgttgactct gcccagaact ttttcacccc aggtatctaa atccttgcct       60
caaaggtcac cactctctaa gngagacctt ccctcattgc ctgcctgtaa gatggaatga      120
tcttccctgt gtcaagcttg cctcgtagcc ccttcttcat cctatttctg acttcttagc      180
cgaggaaaaa tacttaagaa aagaattctc attttgtttt ctgctgtttc cctgtaccta      240
gtacaataca ctacacatgg caggaatgtt ttttttttaa taaaacattg a              291

<210> 470
<211> 199
<212> DNA
<213> Mus musculus

<400> 470
catacctaac ctatcgaggt tcaagtcccg gttccatagt ttgcaaggaa tgcagatttg       60
aaccaatgac tcaacgtctc cgtgctacag attttgtagc atcaacccag caccgacttc      120
acagagctgt acagagacta aggactgctc catattaaaa cactacatgt tcccgctgtt      180
gttaaactat acaaaaaaa                                                   199

<210> 471
<211> 164
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(164)
<223> n = A,T,C or G

<400> 471
acatgtgaca tccccaccaa cggctgtggg tctgagcact gaaactcaga gctntctgga       60
ttgaacanat gtgtgttgtt actgttgcac gtgtggcttg tgattttttg ggggcggggg      120
agttgttttg naaaactatc cccccccca tctctcaaaa aaaa                        164

<210> 472
<211> 290
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(290)
<223> n = A,T,C or G

<400> 472
tgaggaaaat tcccaggtat tcatgtaaca gggaattgag gtaactaaga atgtctggca       60
ctgaagaaga cttatgtcac cgcatgaaag tagttgtccg tgtacgtcct gagaacacaa      120
aagaaaaggc ggtgcagttc tgtaaagtgg ttcatgtagt ggataaacat atactcagtt      180
ttgatccgaa acaagaagaa atcagttttt ttcacagaaa gaaaactacn aattttgata      240
ttactaaaag gcaaaataaa gatctgaagt ttgtatttga aaaaaaaaaa              290
```

123

<210> 473
<211> 252
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(252)
<223> n = A,T,C or G

<400> 473
taaggtcaga ccctatgcat ggggcggtag tataagctgg gacggcntgc tgccaacact   60
aaggattgga cctngccata tacacangag tncgagntcn aggaggcagt aaganagtac   120
tgagccctga gatggngatg tnagagaatt gcttcctnna gcctctgagc tgttatattn   180
ggcnnaacaa gggatnactg atgttgnnnc acaatgagct tgnctgcacc naagancctg   240
gaaaaagaac ag   252

<210> 474
<211> 126
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(126)
<223> n = A,T,C or G

<400> 474
accaaagtac atattnaagc cttctccagg gaaaagccca ggcacacggg ctnaaanatga   60
ngcngncngn anncccctc agagggagaa tgtggtccag caagatcana ctttgcgctg   120
tctgtg   126

<210> 475
<211> 121
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(121)
<223> n = A,T,C or G

<400> 475
acatgtacca acaatttata tnaacaaaca aataataaca tnaatnacat aagtgactnn   60
caagcnanga ctacatagag ataccctagc tcaaaaaaga ccaatagaat acaatggaaa   120
a   121

<210> 476
<211> 322
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(322)
<223> n = A,T,C or G

<400> 476
ttttaccatg acacanaact ggcctggagg agctggtggc acggttgcag ctggggccct   60
gccccaatga tcacccctcg aggggtttgg gagacagagg tgacccgggc ttttggggct   120
ctggtgtgga tccgttgtga caagtatgca ggagacttgc tgcagcttcc tccagcagtc   180
caggagctgc ttctcagttt ggtccggagat gctgccggca aggaagacat cattgagtgg   240
ctcggccatt ttggcatctn tggtacttgc cccaacccag agatcctgat ctgccttgcc   300

124

cggcagcaga aggaaagcgc cc   322

<210> 477
<211> 413
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(413)
<223> n = A,T,C or G

<400> 477
cagggtgtgg gtgacccatg tctanacgcg ggattcggng agtactnaca gncttnatcc   60
ttacanangt gggcacatac tatttcttca ggatncatag gaanttnccc ngtcctttatc   120
tcaanccttn cctcaattct tttccntaca atacaatgat ttcactataa anantaataa   180
ctnaaaaagc cgtngggngt ncngccccng ggagccggcc aacctggaga gcagaaatgg   240
cagactcaaa tagatcccca agatccaggc ccaagcctcg gggacccagg agaagcaagt   300
cggacagtga cacccttttt gaaacttcac ctagtnccgt ggctacnagg agaaccacca   360
ggcagaccac catcacggct gantncacga agggcnccac taatcggaaa ccc   413

<210> 478
<211> 462
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(462)
<223> n = A,T,C or G

<400> 478
gctccactgt tggtgtgcgg ggctctccag aaaccaattg cctgatccga ttcattgccc   60
agcagcgaaa cctaaagaag gctgtgctct ctccgttggc acgagagccc cacttcgagg   120
gtagcccaag actgtatcga aatgccagtg ttttaagaga gcagaatgtc tgcttttcgg   180
tcagcttttc actccataca ggaaactaag atggccagca gtccctcagc agcagaggca   240
gacggagagt ctagatatc agatttgacc agaaaagaag atcttcttga atatcagcag   300
tctgggttcc ctgtaaactc ctcttcaaag cggaggagaa tatcctccca ggacagccct   360
gacaattatc tnagtggcnc caaagccctt gctgacgaag cgtgtgctgg gggtgcctnc   420
acagatcttg ctgagaagtc acctgacatc ggttccgccc ag   462

<210> 479
<211> 112
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(112)
<223> n = A,T,C or G

<400> 479
ctctgacctg ctggcatgcg tggncttcgt ggccaacacc ttactctcag ggcatgtcac   60
tctgtgcctt aactcccgtg cagtggtttg cccgagaggg ttccgccttc at   112

<210> 480
<211> 129
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(129)

<223> n = A,T,C or G

<400> 480
agccggtttg gactgactgg ctgcctncct cctcctgccc ctcctcccgc ttctgcttca   60
gatttantta ttatatgtan gtacnctgnn ncagtctgga ggacncacta nacgagggca   120
ccacgatct   129

<210> 481
<211> 162
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(162)
<223> n = A,T,C or G

<400> 481
ggaccctctc catggcaacg ggnanctcac tgagangnga gtgtancnca acagcangnt   60
gcnnatatgn agncatagct gatgctccca ttatattata tagtgaccga gaaggcgtgg   120
aattattacc catacacnat nacagaatac actgggtgct ta   162

<210> 482
<211> 339
<212> DNA
<213> Mus musculus

<400> 482
cttactgtcc ctctgatgcg gcctaggatg acctgggagt gggcttctgc cctggctggt   60
ggagaattat cttgactaag tgcagggcag cccggaatgg agctgaccag cacagcagaa   120
gccaggaagc gacttcccct ccttgcccgc attcttcgct tcctttcgct ggaaccttcg   180
caccaggcct ggccagagat ctccgtggaa aacctctggt acccaggccc agagacagtg   240
aacaactgct tagatctctg cattcttcac ttcccaccat gagctgtacc cctgcagtgt   300
gagccagaat aaaccttttt ttcccttcaa aaaaaaaaa   339

<210> 483
<211> 107
<212> DNA
<213> Mus musculus

<400> 483
caggatgctc tggtctcatc cttagcccag ctttgaacac actgcttgga caggcttctc   60
ctgcctaaga tttgacaact gttcagttgc tgtgattaaa aaaaaaa   107

<210> 484
<211> 107
<212> DNA
<213> Mus musculus

<400> 484
caggatgctc tggtctcatc cttagcccag ctttgaacac actgcttgga caggcttctc   60
ctgcctaaga tttgacaact gttcagttgc tgtgattaaa aaaaaaa   107

<210> 485
<211> 107
<212> DNA
<213> Mus musculus

<400> 485
caggatgctc tggtctcatc cttagcccag ctttgaacac actgcttgga caggcttctc   60
ctgcctaaga tttgacaact gttcagttgc tgtgattaaa aaaaaaa   107

<210> 486

```
<211> 235
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(235)
<223> n = A,T,C or G

<400> 486
atcaccctca actatcaggn tcggggtgct aggtttcctg ancactgnag atnangctgn        60
caagggcaac tatgggctcc ttgatcaaat ccaggccctt cgctgggtga gtgagaatat       120
tgccttcttt ggaggagatc cccgtagaat tactgtcttt ggctctggca tcggtgcatc       180
ctgtgtcagt ctccttacac tgtctcatca ttctgagggg actcatggag cctgg           235

<210> 487
<211> 101
<212> DNA
<213> Mus musculus

<400> 487
ccacccaact tggaaatatg agtcgtctac agcctctgct ctagtggcat aaatgctgtt        60
gtgtgcacaa gcaataaaat cacctttgag taaaaaaaaa a                          101

<210> 488
<211> 145
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(145)
<223> n = A,T,C or G

<400> 488
cccgtcacac accccgattt cgaaccaagc actgaagtga gaaacatttg tttttaaaca        60
acntgctcta atagtcttac atttaaaaaa taagacgatg cttcctatta aacttgctat       120
tataatatag ataattaaaa aaaaa                                            145

<210> 489
<211> 175
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(175)
<223> n = A,T,C or G

<400> 489
ggttatctcc ctttccacat ggggagcagg tcagacttga gacttcatct ctttgttttt        60
gcacgtatat ccngtgatga acctcaacat aaaatactgg gtttggttaa tccccaggac       120
acananana gagggggggt gtttacnttn aggaatccc cggggggggcc atctg            175

<210> 490
<211> 401
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(401)
<223> n = A,T,C or G
```

127

```
<400> 490
gagccctgaa gttgggattg ggnctgcang tcaatcagac gctgcggntn ntnattgata      60
tccaagnaag cagagaatgt gaggncctcg ntagctccat gagtgaaant cttccaggac     120
tctgtataaa gcgttagtac ttctanaaga aaagactggc cacaagcctc tacaccatcc     180
cagccagcat ctgcaccaag tgactctggt ctctaatatg ctactttaac attcacagtg     240
ctggccattt aatacacaac atgtgtatct tcngaacaaa aanactatac accgtgncca     300
gccagcntct gcaccaagtg actctggtct ctaatatgct actttaacat tcacagtgct     360
ggccatttaa tacacaacat gtgtatcttc aaaaaaaaaa a                         401

<210> 491
<211> 120
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(120)
<223> n = A,T,C or G

<400> 491
ggagagctac cctctnanng gccggancccc tactcaganc gttangacta tcctnanang      60
tgcgatctca cctgattaat gagcccnaca ccttttgtcc ancgcaatga ggatgcttca     120

<210> 492
<211> 194
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(194)
<223> n = A,T,C or G

<400> 492
gaaataacac tcaggagcga ccagggactg agcgagtgga gttgaccgga gcaagangag      60
gncctaaaaa ttcaatnncc ancaaccaca tgaaggctca caancatctg tacagntaca     120
agtgtactca catncataaa ataatgaata aataaatatt tagaatgata tcgngaaata     180
aaggtcattt aatt                                                       194

<210> 493
<211> 118
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(118)
<223> n = A,T,C or G

<400> 493
catcgttgac ctgccaagga gtgaccataa aggaannacg aacttgncnt gtttgggcat      60
taaagaaaac gtggtttnaa naatganact nttacctggc ctcttccaaa acgacata      118

<210> 494
<211> 255
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(255)
<223> n = A,T,C or G
```

```
<400> 494
gattccaatg gagggagatg cccacntgag agatgggcgc ngatcaaaag ccccatctct        60
ctggatttc tacacaacca gtatgaagac aaaaaggaag atctgaggct ctcgaggctg       120
ggtgtggtgt tgcacaccag tacttgggat gcagaggcag gtgaatctct gtgagttcaa       180
ggtcagcctg gttacatagg gagtttcagg acaatcagga ctccatagag agactcggtt       240
tcaaaaacaa aacaa                                                        255

<210> 495
<211> 267
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(267)
<223> n = A,T,C or G

<400> 495
taacgttagc cttacggctn gaaattnacc ggcanctgct gtgcatctgg gccttgcttt        60
gctccagctn gtcaganccg aagnccgaga aagtgnntca nancggncng atgggcagcc       120
angcnctgtn catcacaaan actcacacac ngacttcaag anagcctttg ggtcatcgct       180
ccctttctg tccttttgt gcattttagg acaccgctgt ggtctgtcca agctgttctc       240
aaaacctgtg aggtaacaga aaaaaaa                                           267

<210> 496
<211> 373
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(373)
<223> n = A,T,C or G

<400> 496
aacacaggct ttgcttcaac atgagcaaag tctctgcgca ttcaacccca aaggtctgac        60
ctaccttgcc cagccgacag ccgctgaggg agtagctgga ctcagagagt gctgctccag       120
tgcttttgac atcttgtcta acaaggcacc caggcttccc cgtgggcggg ggcggggcgg       180
ngggcagtga actttgatga ggggctgtgg aacacagact tctgaactag actgcttgnn       240
cttcactgct anctctaaca tgngctgctg catanagaga gttanacccc tgcctctnna       300
tcatactgaa natgactgnt gaaagagana atgaaaaant acctggttaa aaagagaata       360
aacactaaaa acc                                                          373

<210> 497
<211> 145
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(145)
<223> n = A,T,C or G

<400> 497
gcctggagga ggtgcagcgc actgcctaca cctntgagag ngggntgggg cctgcaaccc        60
aggcccttc caaganatct ggcntggct gcaaggcatc tgcccacccc ttaacagcat       120
cctgcccgnt tttctttgcc tgtgg                                             145

<210> 498
<211> 205
<212> DNA
<213> Mus musculus
```

<220>
<221> misc_feature
<222> (1)...(205)
<223> n = A,T,C or G

<400> 498
tcaacggcca tgtccgattt gacctgcccc cgcanggctc tgtcctggcc cggaatgttt   60
ncacccggtc ctgtccctcc cngcactagc cctgctcgcn ganctgngag gaagaanagg   120
acagggctgt accgaccgga aaagggggac ctggaagagc cgcccggccc taaaaatctn   180
ctaagaagaa aagcaggggg gagac   205

<210> 499
<211> 379
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(379)
<223> n = A,T,C or G

<400> 499
ccctcctgga gacagatgga agctccttgg gtcgacagat tacagcttct ggaaccccct   60
actcccttca actccgagat ggacacccac tgtccaggga gaggatgcct ggaaataaca   120
gctgggatct acagtggcca aagagttgtc tccgtcttgc tacatcgaca aactggngct   180
cctgagtgag gattgngccc tgggatggng gattcagttc nttcatttat agttggaaga   240
agantnaaga ggatgtagng tgtccntntt tntattccat gcncagtgcn aagagngact   300
gnaccctcca aanggangtn ccgtgatggn ncttcnaatg cntgcccgca ngccgatgat   360
caaccctgca ctccaaaag   379

<210> 500
<211> 113
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(113)
<223> n = A,T,C or G

<400> 500
atctcacgta ccagatgcta acanaggang ggnctgangc agcctggctg ccacaggctg   60
canaaaggct cccgatggnc atnagaccat atngaccgac ccagaggcca ccg   113

<210> 501
<211> 147
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(147)
<223> n = A,T,C or G

<400> 501
catccaacgt gtgatnagcc catntctgtc canctggggg aggcactttg tgctgnncac   60
canntcaacc tgcttaangn tgatgacatc actgaaactn tagngnatgg gccngcctct   120
gtaaaatcga tcgagagggc aaaccac   147

<210> 502
<211> 169
<212> DNA
<213> Mus musculus

130

```
<220>
<221> misc_feature
<222> (1)...(169)
<223> n = A,T,C or G

<400> 502
aataattgtc tccccgcctg gccaatcagc cctcttttcg gcaatactnc angctacctc        60
agagcatcga actccaagca cttnacanta ctggtttgng gantcncana acnacccaaa       120
gancagcccc natnantncc tttgnctgan gggggatccc gcatacatc                   169

<210> 503
<211> 213
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(213)
<223> n = A,T,C or G

<400> 503
ctttttaaac agactganca ccgngtgctt ctcgctcaag atgatctgat gtctgaagtg        60
gactctcact aaccatgatg gcgacacaga cgctaagtat agacagctat caagatggac       120
agcaaagcat ctgagttcag ttcccagaat ccctggcagc ttacaactgc ccgtaactcc       180
agctcatata tatgtaaatc aaaataaaat aaa                                    213

<210> 504
<211> 176
<212> DNA
<213> Mus musculus

<400> 504
ccctgacgat ttacaggaga tacaggaact tattaatgta atgagacaaa ctggtttcat        60
tttcctacaa aggagagaag gattgtagct acactgtgat cttaagtagg aaatgtcctt       120
gtgccagagg ttcaaaggaa gcaccagcca tcgtttaatg agctccgctc gagcca          176

<210> 505
<211> 103
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(103)
<223> n = A,T,C or G

<400> 505
aagcttcacg ggtaatgacc caccttggag aatgggaaag ctttataag ngggtagang         60
agaattttcc tgacactaaa gaataccttg atgacattaa aaa                         103

<210> 506
<211> 380
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(380)
<223> n = A,T,C or G

<400> 506
tcctcatgcg ggtgaagtat cttttctttt cctggctggt ggtttttgtc ggaagctgga        60
tcatntatgt gcagtattca acctatacag agctatgcag agggaaggac tgtaagaaaa       120
```

```
tcatatgtga caaatacaag accggagtta ttgaccggac ctgcatgcaa cagcctctgt        180
gtcacagaaa cactgtactt tggaaaatgt ctgtccaaca ngcccagcaa ccagangtgt        240
ttagnagttn ttgatnntct accannngat gctnanngtn nnntggnaca agctnttcat        300
nttgnctnnn tanntgnnnt ggatncnnta nctgnagtat cagctatatg atanaccgac        360
cagggggaact actgctctta                                                   380
```

<210> 507
<211> 186
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(186)
<223> n = A,T,C or G

```
<400> 507
aatttgagca ctctgtggct ggctgactta taaattgacc tgatangtag gtccttggac         60
tgngatgaaa gaggcgcact gagacactaa nnctnnatgg ncttgggctc cccgtccggn        120
cgggnnttc tcgngagcag tagtgaanat tggggtgctt ttacaaagct ctatagccac        180
catctg                                                                   186
```

<210> 508
<211> 438
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(438)
<223> n = A,T,C or G

```
<400> 508
gactgagatt tgcactggtt agagtctact gtctggtctc cttggtttct ctagtccaga         60
ggatgggcaa cccacacgga gatacaagac catttgaaag atgcctgatt gaaagattgg        120
attgagctgc cgattcctgt gagctgtact gctgatgtcc tgacaatgca gattggattt        180
gctccaaaga actatttcta aacaggttct tctttgccct attaatcttt ccttcccact        240
acctctggtg tggnggggcta gaagggacat taaaacattt aagaacaaca accctcgaac        300
tgtgaggctg tcagcttcag acaagagaga ctatttactt aaatggccaa tttttgttta        360
aaatggccac tcaaattaaa aggaaaagtg aggatctgga gagaggctca ncanttaana        420
acactgactg atcttcca                                                      438
```

<210> 509
<211> 239
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(239)
<223> n = A,T,C or G

```
<400> 509
gactgagggg ccctctgct cactgaganc ctggactttg aagagncaag nncnacttng         60
ttgccaggct cctctaactg cccnaaggat gaccttatcc atctggccag tncttcaatg        120
ancacttnca ccnaatanat ggaattcnca nccaacagat ntttcccaa tgatccctca        180
cctggcggat tgtctctatac agnaagacat cgtcaattca cctcactgga gacacagtc        239
```

<210> 510
<211> 170
<212> DNA
<213> Mus musculus

```
<220>
<221> misc_feature
<222> (1)...(170)
<223> n = A,T,C or G

<400> 510
ctcaggcctg ctgtcaaaac acaccaatgt ctttgtcagc attcaggagg cagaggcagg      60
cagatcagct gtgagtttgt ggncagcctg gtatctacct caagttccag gtcattcaaa     120
gctacataat gagaccctga tcaaacgaaa tgaaaggaaa caaaaaacaa                 170

<210> 511
<211> 305
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(305)
<223> n = A,T,C or G

<400> 511
atccccatct tgaatcagag cagctgttga ccaaccacag agcctctgga agtcaggcct      60
atcagcattc ctgcatggaa gantgaggaa ggctcctncc agaagctgta tcaccagtga     120
atgatgactg ggaanaaat tggttgganc aaaaggttgc ntttgatccn ccaaggccct      180
taaaattcca caaaaaggtg gaatttnntt ttgcttaaaa aaaanggggn gggaaatttt     240
ttnaaaaaag ggtttcccc cccntgggga aaggttcccg gaaaaaaaac ccctttttc      300
cccgg                                                                305

<210> 512
<211> 297
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(297)
<223> n = A,T,C or G

<400> 512
tggcacagcc tgatanaccg nnaganttca ncactgttgn atgacaatat cacacancaa      60
agtggtgatn ggctcagccc tcagagacct ggcancatnn aacactattn gtggtnggaa     120
ncccacacnc tcccaacacn catttgtgt cacagaacca gacgtntgac tcctnacctt     180
gggctngctg gaccgccttt agaanagtgg tagcctagtg tgnggtccgg atcagaccca     240
tgctgatttn tgcgctttng gatgnctgtc cattttacct gacatttaaa aggcaca        297

<210> 513
<211> 414
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(414)
<223> n = A,T,C or G

<400> 513
gcaggcatac tgtgtaacag tntgtanact gaaaggcctg ggggctatgg agagagacnc      60
cggaaggtcn gcccagctcc ggtcagcaga cangctcttg tgcgtncccc ttggaagaga     120
nggaggagcg aattgacaca ggatctcatg tgcaacantc tancttcaaa cttgctatgt     180
anccaagat ggcgacctcc tgatactcct tccagttccc aaatgtnggg gtttcacgca     240
agcaccgtgc aggcacagac atcatacatc tgctacccag gagactgacc tcanaacagg     300
acggagacaa aaggttctct aaggaaagtt ccagcagagg gaggaggccca catcatctca     360
gaatcatcct aggagaacan caacgcattn catgtcctgc ttcagaatgc taac           414
```

133

<210> 514
<211> 172
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(172)
<223> n = A,T,C or G

<400> 514
ttttattccc ccatgctggg catggaggaa aggccttgct atgccacang gngngngnga   60
gncgncctca cattgggcat tntaagatgg nactgacngc tgggttctaa gggtaaaca   120
tagtctgcnc acatgcaggg gcaggtntcc caccatgtgt tctgcctttc cc   172

<210> 515
<211> 279
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(279)
<223> n = A,T,C or G

<400> 515
gcgcgccaac ttcacaactt ccctntcccg tcacaggggn tctatntncc ccgccngttt   60
ggcggaagga tnccgcgcgc ggnggcggan ncgngctnan ccgtctncgc ccgggctncg   120
ncccaccccc accccacagg nccagaggtt nacaagnnnn taagctttng ataatgngaa   180
gctccaggta nagaggatgc ctgccggtga gcacattaca gctnttgtcg tttctggtgt   240
atgtaatatt taaggttgaa aaaataaatc tcaaaagca   279

<210> 516
<211> 363
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(363)
<223> n = A,T,C or G

<400> 516
gactgagatg gataacgacc agccgcctgt ggtgactgcc accctgctgg tgccccttca   60
gaacggnagc tgcncngaag cagntgaggc cctgctgccc catggcctga tgggattgca   120
tgaggagcac agntggatga gcaacaggac agagcttcat nacgagctga ncnctggaga   180
ggtgtncacc gacagcatct tctttgncgc tttgnggtng ntntccatct ttggcaantn   240
cntngtatgt ctggncatnc accgcatccg gaggactcag nccaccacca nctacttcna   300
ggngagncatg gcgngtgntg accttctcat cagctgtagn cagnacnccg attgtcgtgc   360
tgc   363

<210> 517
<211> 152
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(152)
<223> n = A,T,C or G

<400> 517
acatcctatg tggatggggg ccancttaga acaccttagn atgttnagga tatngctttt   60

134

```
tagaagcaca gttntatata aagggtccta taagnggccc anatagnana tattantact      120
gnctttggtt gtgcaactat gttgcttttg gg                                     152
```

<210> 518
<211> 351
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(351)
<223> n = A,T,C or G

<400> 518
```
actgtatgat tactccgtgn nnnngtcaga ggatnggctg aacaggttga ataaggaggt       60
aacaacaaca gaagcggtag agactacagc ctcttcatac agtcttcata caagaactta      120
tggaccctgn gaatcctgta accacgaaac cagtgaccac agaaccagtg accacagaac      180
cagtgaccac agaaccacag agtccaaatc agaatgatgc catgtccacg ctgcagagtc      240
ctgtgtcctg ctttctgtta tgnaccctcc ttcaaggagg ggtacatttt atgtagaagg      300
aagagggcan ccctggcct tggtggggng ctataaagta attcttacca g                351
```

<210> 519
<211> 358
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(358)
<223> n = A,T,C or G

<400> 519
```
gtgattcctg gagatatctg cgtggaaaag cctgacccac agtcctgtgt ctctagccac       60
tggcacctga aggattccct ggaactttgg ccaaggggtg gctgagggtg tgactcgtac      120
tgggcttcca agagccacca anctggaggg gccagggaca acataaggaa gcagtaacat      180
cgttntgnga tgtcacctac aaaaaaatgn cacaanccac annanctgct gttntggaga      240
tctgngcaac atctgnctg nggaagctnc gtnaccncct tgtgcatctt ggctgctntg      300
ttaccannct gncctggctc ttgccaggac tgtacactg nagggtggga ccgagggc         358
```

<210> 520
<211> 448
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(448)
<223> n = A,T,C or G

<400> 520
```
gagttgctga actccaanta ctgttgaggc taccentgnn annaacatnc acggncgcgg       60
ggggnnggc ttcttacaan aagccctgcn ttctgntaaa ggctggctag tagtcctgct      120
gtacaaatag aaaattaaag anectctaca gggaggcggt tccctcagaa aataataana      180
catacaagaa atatatatcc ccancgtaca ttcaagtcct atggngggng ggctntntct      240
gcatgccacg ttccacaggc tcacttntga tggggcaccc tgcattcatc nccactact      300
ccctgttnct nttctggnac cccaancatg aactggannct cccacatctc acagtgannc      360
ctggacccag tccacccggg acataaagct gcaaanagct accattctat gnaccngtng      420
gatgaactga tcaagcccac cggtctag                                         448
```

<210> 521
<211> 183
<212> DNA
<213> Mus musculus

```
<220>
<221> misc_feature
<222> (1)...(183)
<223> n = A,T,C or G

<400> 521
actgaggtat gaactgctag agaaataaag ttctgccaaa atattgcata tactagtatc        60
ttgtaacatg ctttcttgaa agattttggn gctttanagg gtnctcacct gtgctacagg       120
ggactgggaa aaagtggaaa taaagtgatt gtattttta atcatcaccg tataaaaaaa       180
aaa                                                                       183

<210> 522
<211> 110
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(110)
<223> n = A,T,C or G

<400> 522
catgttttat ttgacaattc ctgcggcgtn taaagtgaan gtncatannc ccctgngccc        60
gcgctcggtc actcagactc acatagnttt ggctgctggc tgcgttccca                   110

<210> 523
<211> 201
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(201)
<223> n = A,T,C or G

<400> 523
atgcatgact acagcnagcg cannnccnag gnngaggang ccgaggtnta cgcagttcct        60
tcacangtnt gnatnnattg cctactgtgt gccannctgt acaagtcttt gtccttgggc       120
tcctgctaac agattttaaa atgtaaatcg acaactgatg ggtgaatgtg aatttgctac       180
tgtgaataaa tatagccagt a                                                  201

<210> 524
<211> 128
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(128)
<223> n = A,T,C or G

<400> 524
cagctggctc caaaggtttg ngggntcatt catnnctctg acctcactgn ctgaataaat        60
gaataaaatt ccaaataagc atncttgctc tgaccccggg cctaaaancg gngatcctgg       120
tggggctg                                                                 128

<210> 525
<211> 377
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
```

<222> (1)...(377)
<223> n = A,T,C or G

<400> 525
agggtctgct catccctgag tcagcagaag cgaccggcat cagccagaat accaggagaa   60
gttctttgat gcgtttctct ctatgaagtg aagaccagcg aagcattgta cagtgtatca   120
atgcaagagc tgtctcccca cagttngtgg ggttccattt atattctttc taaacatcac   180
aagccctctc aagtgtctgc agcaaaacat cacacagccc tctcagaaga cagcgtccag   240
gaaaacatca cacgatacaa gggagttngc taaaganacc agaattttcc cacttccatc   300
cagaggcagg tggatcttct gtgagttcaa gaccagnctg ttctacatag canggtttca   360
agctagtag ggttaca   377

<210> 526
<211> 140
<212> DNA
<213> Mus musculus

<400> 526
actcgggcac cgttctgaca tttaatgtgg aatttacatg atccctcaca tcccatccca   60
cggttcatcc acatgaagat tcatccaagg ggaaaaccag agttcttgga agcccgagtc   120
caaaacccaa agaaaaaaaa   140

<210> 527
<211> 248
<212> DNA
<213> Mus musculus

<400> 527
agaactgagg tctgcctggg cttatgaaga caaagccccc caagaccaat gagcagatgc   60
cccagcagtt ggccaggatc atctgttgaa caccccctca ggtactccac ccaccagtgg   120
ccacagttaa gctctggaat gtgctcagga tgatggacaa caaggactta gaagcgaaa   180
tacacccctt gaagaatgag gacaagaaat cacaggaaaa cccaggaaag ccccgtaaa   240
aaaaaaaa   248

<210> 528
<211> 121
<212> DNA
<213> Mus musculus

<400> 528
ggtgcatggg cgtgactggt ccaaaatttt cgaaacagga agagtaccct cagcaaatct   60
gagcacattg ggttgacaat cttctcgcag aggcagggtg atcaacctgt ccttcatgcc   120
a   121

<210> 529
<211> 281
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(281)
<223> n = A,T,C or G

<400> 529
tgaacttgaa gcttgagtta ttganatcag gggcnaacat gctgnaccca acgagtgaaa   60
gggacctttt tgaccaagaa aacatggagg agatctccca actcgcttcc ctggagatgt   120
ctgggggatg tagtcgccaa tacaaactca accagtcgtc ctagaaaaac ccagctaccc   180
agactccggg tacgttacgg nagcgaacat tnttcagggt attcggatcc aaaggncgcc   240
agacaaagtc ataataaatt acggaagtga acccctgcaa c   281

<210> 530
<211> 101

137

```
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(101)
<223> n = A,T,C or G

<400> 530
caggttctga acagganctt tgacgagcgg cantccaaaga gttaatgctt ctggcctagg          60
agatggcgtc nncagatntt nagancagca gctcttcaca t                            101

<210> 531
<211> 177
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(177)
<223> n = A,T,C or G

<400> 531
tcctgcgctt tgacgacgga gggctactac aggcagnttc tcttgagtca tatgacnatt          60
cttctttcct gccntggaaa ccagtgaact gntnttcctg nnctatgnan tatgaacngt         120
atnacngtcn gtgnagttat ctgcatgaac ctnctactag aattacctttt ttagagt           177

<210> 532
<211> 367
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(367)
<223> n = A,T,C or G

<400> 532
agtgggggtct ttcatactga gccctggaan aggacaaaat cgctcaggag agactataag          60
gtacaatgtg gacattctca gccttaagat gtggaaattt agccagagct cacagcatgc         120
cgtggaggtt gccgacagga caccaactct gcagactgtg tcttctcaga aagccgcgac         180
cagctctgaa aatcaaaccc tcttcagctt gtgtcaccta cggaacggac agccagtcag         240
ataaagaaaa caagagaacg gtggaaaagc tcagtgcatg ttcagttgac attagaaaaa         300
tccgcaggct gaaaggatgg ggtgcttcta gaggaagaaa cctacgttga agagattgca         360
aatattt                                                                  367

<210> 533
<211> 102
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(102)
<223> n = A,T,C or G

<400> 533
ctcctgtttc cagtgtgatc aatcaccaat acaaaggagt tcatgtgaca nctncgccac          60
ttttaatatg aagcacttat tgaattataa aaaaagaagc tc                           102

<210> 534
<211> 212
<212> DNA
```

138

<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(212)
<223> n = A,T,C or G

<400> 534
ttctagtgcc aatcaggaga gctgaccggg taccaatttc tttcaaggtg ctcccaggtg   60
accatgaata tccaaaatgt agatcaaaga gaacgtcgta cgagtggtac atccctaaag   120
gggtcttaaa gacgggctgg atgaataagc acctgaacct ggtgccggcg ctggtggtcg   180
ngttctatga gctggactgg gacgagcctc ag   212

<210> 535
<211> 337
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(337)
<223> n = A,T,C or G

<400> 535
ctgtcaatag ctgcttggtn aggggccagc acttctggac ctctgnctgc ggcctgggac   60
acagagctta tatnangntt ncaaaancag atgtgatgga ctagagagat ggttcatgcc   120
actaagagag atnnactgcc ctagcagaan accanagata tctntgttnt cagcacccat   180
gntggacatc ttaaaccat ctctaaatcc ggctctaggt gatccaatgt cttcttccca   240
gactccaagg gcacctgtac tcaagtgcac aaacccacat tttaaaaaaa aatatgtata   300
ttaaaatata ataaaaataa tctcaaaaat aacaaaa   337

<210> 536
<211> 255
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(255)
<223> n = A,T,C or G

<400> 536
tactatggga agacccantg aatcnngggt ggggcctttc cctggactgn ctgangagcg   60
aagaaagcac tctgagcncc ncntcncnag agaggctgcg gnctcggncn ctcatgagct   120
gcacgggaat gccagangag gnggcccttt acctccagcg gcccggagcc ccaaagagat   180
gagcctccat cccctntggn gtccgccatt attgattaca ccntgcccct ncaccttta   240
cctacttgaa gcaga   255

<210> 537
<211> 286
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(286)
<223> n = A,T,C or G

<400> 537
gactgagaga gccgagtnnt gtcnccacag ccattggcag nggcacttgt atgcccctgn   60
caagcngtct atcctgaggt ggaggangnn ncctngngt tctggctggt aaccagcaca   120
gtatcncctt taagcgttcc aganggantt tganancctt tcctaantca aaggtggaat   180
atntggggat ntgaanaant agagaatgcn aagcgctgac ttaacgagat gccacgtnan   240

                                    139

```
tccggggatg ccacnctnac natatttccc caaagatgga ggcctt                        286

<210> 538
<211> 266
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(266)
<223> n = A,T,C or G

<400> 538
gactgagatg ctaagccgat ggttattcca tcancacctg cccaccagta atggaactca         60
ccgaagcata cagccgtcct ctnttgntca tggccagggn ncangacgca gggacaacgc        120
ctgntgncag atgccgnntt nnggaaaccn agcnctgccn agaggantgg actccgtgca        180
tcaggatgag ancaaagaga acngactggg actggccatg cacccnggng tcntcaaaac        240
antaggagag ggcagataaa tccttg                                              266

<210> 539
<211> 498
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(498)
<223> n = A,T,C or G

<400> 539
gacgtctggg gagctcctgc attaagtcag actgaggngg gnncttncat ganncggtnc         60
tgaacnnnnn gggngacgcc ntnccatggc ctgagctgna ntnantacct gncagatacc        120
tatnaattca tttattncac cganaanata tctacctaga ggatctagat ntcgtaccat        180
ggcataangc ggnctgcact tgttattagg aagaataaan agctctgcct tancaggtgt        240
tcaacattaa tantacanan aangcttagg cnncaagacc ngttacctct cccaggaagc        300
atgcatgcag cactgctctg gtaagcagat gcatcctttc ctgaccccgg gcctaaaagc        360
ggtgatcctg gtggggctgt tcctcatggt tctgatcctc ctcctggaa cctctatggt        420
ctgcctcatc cgtgtggttc gcanaaagca ggagcgtgcg ctgcgcactg tttggagcac        480
tgcggatgac aaggagca                                                       498

<210> 540
<211> 270
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(270)
<223> n = A,T,C or G

<400> 540
gactgagtcg ttctgccant ctttaantgt ctganttacc ttgaaagang tgtggagaag         60
tgcacagtag tcgccagagc ggntaaatgc ngagtcntcn ttcagttctt cggnaagcat        120
gggtnttaaa aagacctcac attgtgtntt tccaagacag cccagccctt tgaaaatttn        180
tctttcaaaa aagaggctgg ggngcgaaat atccctggat ggtttaaacc caagncttgg        240
ctggactgaa ggcccattgg ggggtttttg                                         270

<210> 541
<211> 361
<212> DNA
<213> Mus musculus

<220>
```

140

```
<221> misc_feature
<222> (1)...(361)
<223> n = A,T,C or G

<400> 541
gtgctgtcac cctactgngg ncatcctgtt tgaacacacg actacctatc cctcaaccag        60
atcgtgcgc atantaatga agaaacacac aggaacaagt gctgaaaacc anattatnaa        120
gaacagcttg agcanggggcc cgtgatagaa tgactcagcn aggtgttntt cactataaag      180
cntgaccggt acccacatgg ccagtaccac caacatccta ngaacctgaa tcctcccaaa       240
gacaggtgag cgctcgtgat tctctgagca gnaagggaat tttgtttgg gtcttatttg        300
ccagctgaga aaatgcaaat ggnatattca ttaagatgtn atgcggggag aaaaataaaa       360
a                                                                       361

<210> 542
<211> 217
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(217)
<223> n = A,T,C or G

<400> 542
gcatactgga gtgatctggc atagactcat actgtgttag aaaagggagc ctggntcagn        60
cctctctggc aggctngcac ctntatnctt ccttcttgga atcaagacat gggattatcc       120
ttcctcctcc cccagggtct cacagcacag gccctgctct gtgtgagnga cctccttcag       180
agacacttgc cccatgcagc tcgatgggtt ctggttt                               217

<210> 543
<211> 427
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(427)
<223> n = A,T,C or G

<400> 543
gactgagatg ttaaagtgac accaaggnag tagtgatgnn ggtggntgga ggctggtcat        60
ctaccttaac agcaaagaca ctaannagat gtntcaagat gctgcgccct ttaccgatgt       120
ctgagttgtc cacacttcca tcctgatgtc cttatgtggg tgaagatgat cccaacctgn       180
agccaacaca gaaaagccca taacctgtgg ncctcaccac ctctacagca ntgaaggtct       240
ccagngtcac cctgtggacc caccacaccc agctgaagaa ggctccagga gataacagag       300
atgggtggtc atcaggtcct ncaacttcct aaagatagga ctaacggggg gcctattatt       360
atcgggtgnc ctttctttgn tctttccatt attctgatca ttccaaatat taacccttta      420
aatactg                                                                427

<210> 544
<211> 362
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(362)
<223> n = A,T,C or G

<400> 544
ctgggcacag gccatagata cttcttgngn aactctcaaa ngttggattg gatatcangg        60
ccgngntcat ancaaaagtc ngngcagnan gcctnctngn acgntcnang ncagggcngg       120
agacactgan cagccnatct ggcctcagca acnagcacct gacagtnngg acngtanaga       180
```

```
aggctctcac ggctgcnatc ggaggctgca aacgccgagn ttnncggccc agcaggtnaa      240
catatgggca gcaatgctgn ngctgtcacc accaccacca ccatagccac tgtcaccacc      300
gaggatagga agaaggactt taaganaaac cgatgnctgg ctattgggat acaggggggac     360
ga                                                                     362

<210> 545
<211> 235
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(235)
<223> n = A,T,C or G

<400> 545
gggcacccag acattctacc tccaagaaac cacgctacag tcaccagata aaagtggctg       60
ccacaggtca cctggctgag caacactgct ggccagtcgg aggttgcttg ccagacagga      120
gctganccca cctgcagcca agccttccag cactaaggtc cccagcagtg ggaagtactc      180
aaacnggntg aanagccatc aagggcnaaa cttgagggg ggggggggcc caaat           235

<210> 546
<211> 117
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(117)
<223> n = A,T,C or G

<400> 546
cgttaggggc aaaaacccag ggcaaggatg ggaaaagcaa gtactcgact ctcagcctgt       60
ttgacaagta taaagggagg tcagcaggcg cntgtcagga aataaataag aagaata        117

<210> 547
<211> 206
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(206)
<223> n = A,T,C or G

<400> 547
gactgaggac ggtacacccca gcaagaagtc tangcaggga aataggcaan actncanttc       60
ngtgaatatt tcagnggtnc tatgtgnagg agccctgggn tgtnctgaaa cttgctctgt      120
ggaccaggct gacctatgcc tactgaatgc tgggatgaaa ggcagtgcac caccactatg      180
cagcatttt ttttttaaaa gggccc                                           206

<210> 548
<211> 239
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(239)
<223> n = A,T,C or G

<400> 548
gttaagaact gttcagatac cacgaagtca tcatgtgacg tgacagataa gtgggttgga       60
```

142

```
gggcatggag agctacgtcg tcgccatcgt catagtgcac agaggggact tgaccgtgtg      120
ccgctgctca gactacatcg tgcctgcaaa cgctcctctt gagccgccag aatttgagat      180
cggtggcttt acagaccaca taaancgtga cgatgggaat ttccaccttg gacccaagg       239


<210> 549
<211> 111
<212> DNA
<213> Mus musculus

<400> 549
gactgagagc tcagagacaa ggaagcagca gtcacactgg gggccacaga agggccctca       60
gtggcgtcca tggctggcct ggaccccaca ctgagcacaa gtcacccatt g               111


<210> 550
<211> 120
<212> DNA
<213> Mus musculus

<400> 550
agcgtgaggg ttcaaaaagg attcttcgct ccaatgagat catccttcca gccagtggcc       60
tggtggagac agagctccag ttaaccaaat taagtttctc aacatataaa aattaaaaaa      120


<210> 551
<211> 287
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(287)
<223> n = A,T,C or G

<400> 551
caaccctgaa cccacnacaa tgacattatg atgcngcatn tgaaaattca ntcaaattct       60
ctaaaagatc cagcctctgc cttgaagatg acctgctctg aggagaatcc aactgcnaat      120
tctgggctgg gnaagangga aatgggggct tccagnncca ttanngngct gttnccatnt      180
tgngccccng agcagngtga gcgnnctncc ctgnaagata acccaaanna tgggggggcgc      240
angcgantga aaaaaggaac caattcctnt caggggggatt ttggagg                    287


<210> 552
<211> 397
<212> DNA
<213> Mus musculus

<400> 552
atactccttg cttagtttta ggccattgac tatgcagcct agtgactgga atgatgtgaa       60
aaaacctaag tatggtcact tgtcagagtc tgcatctcaa tatcaagaat ctgttgacat      120
cctggagcta ggtcatttta cctgggacaa ataacctaaaa gaaacatgtt cagtcccagc     180
gcctgtccat tgcttcaagc agtcctacac acctccaagt aatgagttca agatcagcat      240
gaaattggaa gcacaggatc ccaggaacac cacatccacc tgtattgcca cggtcgttgg      300
attgacaggt gcccgacttc gtctgcgcct tgatggcagt gacaacaaga atgacttctg      360
gagactggtt gactcctctg aaatccagcc accgact                               397


<210> 553
<211> 277
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(277)
<223> n = A,T,C or G
```

<400> 553

```
actgaggaaa gaagangatg gagnagncgc cgaatctgag gccttggctc ccgtgtttgg      60
gaccaggagg gaaggagaga agatagattt cgctgagaca cttgcccggg tccttttgtg     120
ggtcagaatg ggtcccgatg agaacctgag tgtgagagtg aaactacgga gtatcatttg     180
tagctttgtt cctcaagact tgccatgaga tttaagtaga gcgcctgtgt ggaaattgtt     240
aattgtagct agtcagatcg aagactattg acagcat                             277
```

<210> 554
<211> 109
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(109)
<223> n = A,T,C or G

<400> 554

```
tttgacctgc tcctgggaan ttgctgnntc gtaaagcac tncnntatgg aactgcagca      60
gccnncaagg acagcatctg ctataaccta cagaccgtgg gggaggtct                 109
```

<210> 555
<211> 215
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(215)
<223> n = A,T,C or G

<400> 555

```
ttcctacagt tccacctacc tcgtgtgtac aaagctgcca ccttncagnc ctcnggqgctg    60
gnctcctgta ggacctgnga tcccacctcc ngactccagn tacncccanc ttccacctga    120
angggqgnctc tgctngccaa natatccancc ctgaattctc ctaacaaagg tgtactgtct  180
gactttatga ctgacntccc tgttaaccca ctttt                               215
```

<210> 556
<211> 358
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(358)
<223> n = A,T,C or G

<400> 556

```
actgactgcg agtcccccag ttccctgga gatctagctg ggagcccagg ctgtgacaag      60
acacgcggct gtgcaaaggc ggttagacat tatggaggag acggtggaga agacagtgga    120
gcacctggag gcggaagtga caggtctgct gggcctgctg gaggaactgg cttcaaacct    180
tcccacaggg cccttcagcc ccaaacctga cttgcttgga gatgatggtt tctgacttcc    240
agggatggtg gagcctgcca gctgaagtca tccctcanag aaccaagcca ggtcttcctg    300
ccttcctgcc ccacctttgt gtgaaataaa agctccgatt tggacccaaa aaaaaaaa     358
```

<210> 557
<211> 471
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(471)

144

<223> n = A,T,C or G

<400> 557
```
cactttcatc gcaatgtccg atcgtttggg gcaaataacc cagggcaagg atgggaaaag      60
caagtactcg actctcagcc tgtttgacaa gtataaaggg aggtcagtag gcagctgtca     120
ggtcctcagt tattcctaga catggcttac agagtctcgg gaaagttgcc acantccggc     180
ggnngccacc cgcctgcaaa cctgccaagc ctgaagtctg aaaacaaagg aaacgacccc     240
aacatcgtga tagttcccaa ggacgggaca ggatgggcca acaagcagga ccagcaagac     300
ccaaagagtt ccagtgtgac ggcctctcag ccgccggagt cgcagncgca gccgggtttg     360
cagaaatctg tctccaattt gcagaaaccg acacagtnta tcagtcanga gaacacaaat     420
ncagtgncag gtggaccaac antcatgggc nnaacagagt acaagtagtc g             471
```

<210> 558
<211> 362
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(362)
<223> n = A,T,C or G

<400> 558
```
gactgagatg ggaacagcac atcgtcgttt tggggggaagt ctacaactac tcctgtgaac      60
cagattcaag aaacaatttc tancanttgt gtggtgatct tctcaaaaac atcctgctct     120
tactgttcca tggccaagaa gatttccat gacatgaatg tcaactacaa ggctgtggag     180
ttggatatgc tggaaatatgg caaccagttt caagatgcgc ttacacaagat gactggggaa     240
agaaccgttc ccaggatatt tgtcaatgga cgatttattg gaggcgcagc ggacactcac     300
aggcttcaca aagaagggaa attgctgcct ctggttcatc agtgttattt aaaaaaaaaa     360
ca                                                                   362
```

<210> 559
<211> 135
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(135)
<223> n = A,T,C or G

<400> 559
```
ggatgcccct ggggggttcg tgtatcgngg ggtcaatgct ctacaggcca nantcaccct      60
tattgaaagg gangtncctc caccttngt tcatggcana agantataag ntganagctg     120
tctgcggttc ccttt                                                     135
```

<210> 560
<211> 174
<212> DNA
<213> Mus musculus

<400> 560
```
gaactgaggt attctcatgg gagcagtaat aaaagttata gagtttaaaa agctggcaaa      60
ttggaaggag gaagaaatgt ttcgcccaa catgtttttc cttctcttgc tcccacctat     120
tatctttgag tcaggatact cactgcacaa ggggaacttc tttcagaaca tcgg          174
```

<210> 561
<211> 300
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature

<220>
<221> misc_feature
<222> (1)...(300)
<223> n = A,T,C or G

<400> 561
atctctactg cctccaacac gccgaatcct ggctganctt ttacagcaaa cagccaactg   60
gaacaagatg aatgtggaac agtaccctgc ccctctggag tgtttataatg agttgggaca   120
tgtctctgta gaaagatttg cccaactttg tcaggaactc atggatacac taagggcaat   180
aaggcagccc aagagcctct cttttgctac acgtatatgc cacaaatgtg gcgagccctg   240
tgtctatggt caggggggta gactttgttt ttgctggcgg ngaacatgga ttcagaactt   300

<210> 562
<211> 192
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(192)
<223> n = A,T,C or G

<400> 562
atttcgcaac tgaaacttgc aatcatttca gggccatacc cattaaacaa gcacagtgcc   60
aggtaaaatg acaggcgaaa ctgcatccat gaatttacgg agggactatt tggtttttcat   120
ttantacttt taccacctca ttttatgtct ccggcaaagc caaaggaacc aaacttactt   180
taaaaaaaaa aa   192

<210> 563
<211> 359
<212> DNA
<213> Mus musculus

<400> 563
ctccaacctg tcaagttgtt ggagatcctg caatcgccgc cgccgctgca gcagtcctga   60
aagcggcaga gccatgcagt gagcacatcc agcgaccgcc ggccccacag aggaaggctc   120
cagcctggaa aggaaatgct atgagatggc aagataggga caagagac agtcctgagg   180
tttctcagtg tgacagcgcc caaaccagag ttcaggtccc aactcacagc caggttccct   240
cgtacgcccc aggccttcct ctctaagcct tagaagtgaa agtatctggg ggttgggaca   300
atcaccaagt atgtctacaa acggctttcc ttaaaccatc atcaataaag cgagcaaga   359

<210> 564
<211> 327
<212> DNA
<213> Mus musculus

<400> 564
ggcaggcaca gctcctctgg cagacgtagg tcctggtgga aacggggttc aggggactcc   60
gcagccttca ccagcatgag ccatccagag gagtcaacag aggtgacact gaagactgac   120
gtggagtcag gagccagtgg ctacagtgtc acaggtggag gggatcaggg gatctttgtc   180
aagcaagtac tgaaggactc gtcggctgca aagctgttca acctgagaga aggagatcaa   240
ctgcttagtg cgaccatatt ctttgaccat atgaaatatg aagatgctct taaaatcctt   300
cagtactcag aaccatacaa agttcag   327

<210> 565
<211> 119
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(119)
<223> n = A,T,C or G

<400> 565

146

```
tgtaatggaa tccgatgtcc tcttctggtc tgtctaagag atctacagta aataagtaag        60
taaaaaagaa ggaaagaaag acaagaaaag ganagtgaat gaaagatttt ttaaaaaaa        119

<210> 566
<211> 125
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(125)
<223> n = A,T,C or G

<400> 566
agatccccaa ctcccaccaa nagccagctt tangtgtntt aangacagta cnaccatcga        60
gcatggtngc tcctctgnat gnngggagat gatgactgtc ncattgctgt gtgatggcct       120
ggaat                                                                  125

<210> 567
<211> 362
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(362)
<223> n = A,T,C or G

<400> 567
gggatcgttt gcctaagatg cgaccatgcc atccaggctt ctccacaccc tggcaagttt        60
acacagcata tcaagcaaag gctcatcagt gccagagact tacttggctt acattaagac       120
cacttaggaa atcctngaaa gtacattttt gccacagggg gcctgacaat acangctaca       180
ttgacnctnn ttatttgcac cntatgncng ntgancagtt cgganncgnn ncanganata       240
cctggaaaag anncggataa catccangaca caagccagac tctttgtcgn taaangctag       300
nccatnnggt tggacngcna aaaacaccng ncaagncnnt gcnccccctt ttgggaatca       360
ca                                                                     362

<210> 568
<211> 186
<212> DNA
<213> Mus musculus

<400> 568
gaccggagct ggctgaggat ccaggcagga gctgtgcagc atctgagtca ggctcgctct        60
ctcccacacc ccagagccga cctgcctgaa cattcgaggt tattcttagt aactctcagg       120
tttcactcta gcacactgag catgctcaag tgggtaaata cagaaatctg tttttaaaaa       180
aaaaaa                                                                 186

<210> 569
<211> 101
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(101)
<223> n = A,T,C or G

<400> 569
acctgactga gacatgcagc ttccctgtgc ntcactaggc caccaggata tccacctgtn        60
acctcncntg gataaatgtt tctgttttgg aaaaaaaaaa a                           101

<210> 570
```

<211> 137
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(137)
<223> n = A,T,C or G

<400> 570
tattctcaga ggaat017gga agaattnagg aaaatctgnn atttcctacc nngaccangc   60
nncagaagct tcccacannc ntgtaggcat tgccgctcat caggaagtcc cgtcttacgg   120
aagccagtta tcactta   137

<210> 571
<211> 412
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(412)
<223> n = A,T,C or G

<400> 571
tgagcctgat gatagcagat cttaatgatg gaaggtacac gcccatgcan ccttgtgaan   60
caactggcac cacanggnca nagagtcccn tgatacccan gtntcatttn ctcaaggacc   120
cagcagactg aggacatctg caaaattcct aaggctagag ngaaagacta cagngaactc   180
taacacccca gcaaggctcc accttctcct atcagagcta cgggacaccc aacctgggcc   240
gcacgcagtc ttctctgcag ttgggacagg nnnntnntct gnccttgntt tcccacagcc   300
ngttttttcan nnctnanatt nccatgctng tggggccctg natttttagna natnnntggan   360
cannctgtnc ctgggcggnc cccagcgctc acctggaaca gaggggagcc ca   412

<210> 572
<211> 426
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(426)
<223> n = A,T,C or G

<400> 572
ggagctgggg agaaggtgaa ggcttgccat gntcannctg gcccaagcca ttccaggggac   60
tatctttngt tactattgct gtgataaaac accntgacca aaggcaaggt ggagaangan   120
gggttnattt caacttacaa ctcttggttg actccatcac tganaggatt tgaggcataa   180
actcaaggaa caaacctang aggtaggaac tggangacat gggctgggag aagactgctc   240
ttactggttt ggtnctnatg gtttgcccag ggtgctttct catacaactn aggaccaccc   300
ncgnagnggg gccagaggtg caccacccgt ctgtaactcc agnttcaggg gataatctga   360
tacctctttt tggctccaag aacangcagg catatacaca taaatgcagg gcaaaacatt   420
catacg   426

<210> 573
<211> 767
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(767)
<223> n = A,T,C or G

```
<400> 573
gtactgctca aacggacctt cgaggacaga ttgcggagcg tctactcgag acagcagggt        60
gacaagtctg cctccagttc tctcactgtt ggatcttgag acaacaggaa aatgacttcc       120
catgacccaa aggccgtcac tcgcagaacc aaggtggctc ccaccaagag gatgagcagg       180
ttcttgaaac actttacggt ggttggggac gactaccaca cgtggaatgt caactacaag       240
aagtgggaga atgaggagga ggaggaggag ccagcgccca catcagcaga gggtgagggc       300
aatgctgcgg gcccagatgc cgaggctggc tctgcctcca cgcccaggca gtccctggac       360
ttcaggagcc gactgaggaa actcttcagt tcccacaggt ttcaggtcat catcatctgc       420
ctggtggtcc tggacgccct cctcgtgctt gctgaactcc tcctggattt gaagatcatc       480
gagccggacg agcaagacta tgccggtcac ggcgttccac tacatgagct ttgccatcct       540
ggncttcttc atgttgggag anttttttta agatcttcgg cttncgctta gagttctttc       600
accacaaagt ttgagaaacc tggatgcctt tgtggtggng gggcttttnc gtccttgacc       660
tttggctntt gttaaaagcc cccctctcna aactcttngg gttgctnanc tgctttcntc       720
tttnagggg gcccccctta ccaccgggnt ctccatctcc gggaaaa              767

<210> 574
<211> 456
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(456)
<223> n = A,T,C or G

<400> 574
ccttgtaaat gcaatggctg gaagacccta acccctctcc tactccacca agaggagacc        60
tgcagcagat aattgtcagt ttgacagaat cctgtcgaag ctgtagccat gcccttgctg       120
ctcacgtttc tcacttggag aatgtgtcag aggaagagat ggacagactc ctgggaattg       180
ngttggatgt ggagtacctc ttcacctgcg tccacaaaga agaagatgca gataccaaac       240
aagtgtactt ctacctattc aagctcttga gaaagtcaat tttannaaga ggaaaacctg       300
tggttgaagg ctccttggag aagaagccgc catttgagaa gcccagtatt gaacagggtg       360
tgaacaactt cgtgcagtac aagttttagtc acttgccatc gaaagaagag gcaggacanc       420
gatccgagct ggcccaagat gtttctgaac cgcatt               456
```